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SOME OBSERVATIONS OF VERTEBRATE FAUNA OF THE NEBRASKA SANDHILLS, 1941 THROUGH 1943

H. Elliott McClure*

It has been twenty-two years since I had the pleasure of studying the fauna of Nebraska's sandhill country. During the three years from 1941 to 1944 I tallied birds from roadside and horseback. In the intervening years between then and the present, America's population has grown from 131 million to 179 million. I am not aware of the effect this mass of humanity has had upon the economy of the sandhill area, but probably no habitat in the country has been free of its impacts. Because of this I feel that my records of species and the numbers that I saw then may have historical interest to workers in the area today.

The bulk of the observations was made at the W. E. Dunne ranch in Loup County (Fig. 1) and at the Valentine Wildlife Refuge south of Valentine in Cherry County (Fig. 2). The Dunne ranch lay astride of the Calamus River in the northwest portion of Loup County. About 900 acres of river valley (Fig. 1) were in tall meadow grass which was harvested each fall and stacked for winter feed. South of the hay meadows were pastures on low hills sparsely clothed with grass (Fig. 3). On the more than 3000 acres were run a herd of approximately 300 head of Hereford Cattle. Wild hay, supplemented with commercial feed, supplied them in the winter on the meadows, and they ranged the hills in summer. The only cultivation was in two small fields planted to corn (Fig. 4). Ranch headquarters and fields were protected by windbreaks of cottonwood, plum, and Chinese elm.

With this controlled grazing and sustained pasture program, numerous natural habitats were maintained that supported a variety of wildlife. Bordering the river were dense thickets of willows and occasional cottonwoods (Fig. 1), while in hollows in the hills were tangles of the tough briar-like plum Fig. 3) Cattle shaded in these plum thickets on hot summer days and fed among the willows in winter.

Each week a tally of birds and mammals was made from horseback along the 15-mile route shown in Fig. 4. Four hours were spent along the Calamus in the morning and an equal time in the afternoon in the hills. Each willow or plum thicket was explored on foot and many hours were spent on hilltops from which upland game cover could be watched. All game and its activities were recorded, and in 1943 observations were made of several species of nesting song birds.

The usual routine was to spend Wednesday at the ranch, drive on to the Valentine Refuge on Thursday morning, and spend the afternoon in observations there. The return trip to Ord was made on Friday afternoon or Saturday morning. This series of observations entailed about 350 miles of driving during which conspicuous wild mammals and birds seen from the car were recorded.

Upland game were not concerned by the field truck which could be parked at prairie chicken stamping grounds without disturbing them (Fig. 5). Coyotes often passed by to inspect it and swallows even entered it in search of suitable nesting sites.

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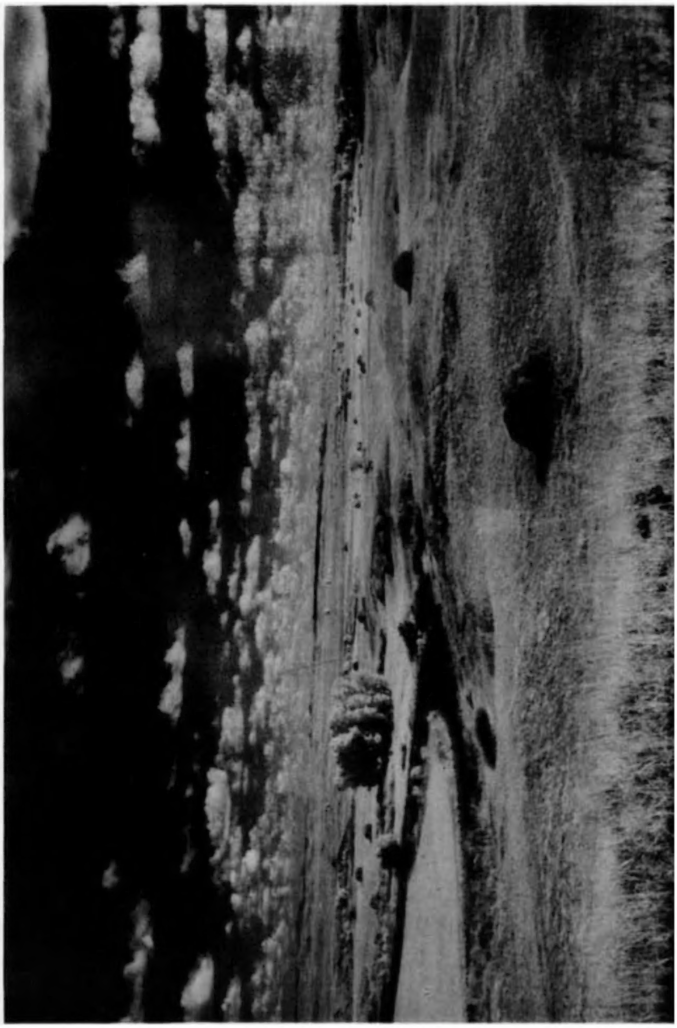

Fig. 1 The W. E. Dunne Ranch, Loup County, Nebraska.

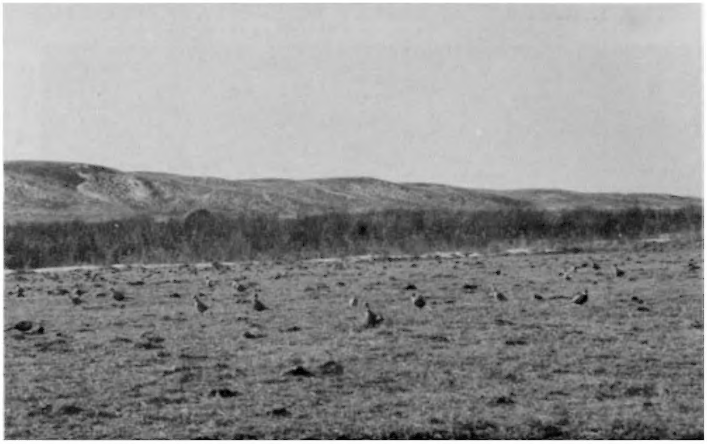

Fig. 2 The Nebraska Sandhills at the Valentine Wildlife Refuge, Cherry County.

Game Birds

The seasonal abundance of game birds at the ranch is given in Table 1. Ring-necked Pheasants were permanent residents with yearly abundance as shown in Fig. 6. During winter months they were conspicuous as they fed in the corn fields or about haystacks. In May and June they dispersed from the valley into the hills to nest, became secretive, and became more inconspicuous because of vegetative cover. With the hatching of chicks in June and July the populations rapidly increased and the birds became bolder and more conspicuous.

Prairie Chickens and Sharp-tailed Grouse were both winter residents about the ranch headquarters and windbreaks, from which they moved into the hills to nest. There were no stamping grounds on the ranch but two were near the roadside several miles to the east and south (Fig. 5). Each spring Prairie Chicken booming could be heard from the ranch.

Small coveys of Bob-white Quail led a precarious existence since winters were apt to be severe for them. They usually remained near the ranch headquarters and were never seen back in the hills.

Chukar partridges were released among the windbreaks at the headquarters in 1942 and a few attempted to nest in 1943, but the release gradually dwindled and the species failed to become established.

The Mourning Dove was a common summer resident, nesting in cottonwoods and plums and reaching peak abundance during migration in August and September. The common Snipe and Upland Plover were also summer residents and probably nested here. Both Mallard and Blue-winged Teal nested on the ranch, usually back in the hills away from the river. The ducklings were walked to the meadows and river. Other waterfowl appeared during spring migration.

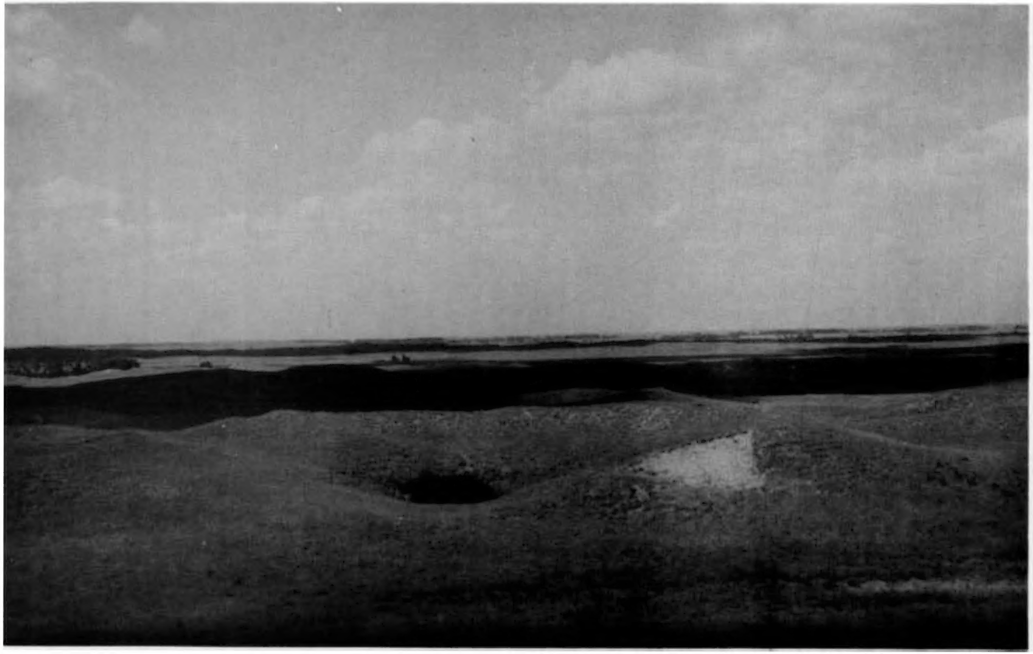

Fig. 3 The W. E. Dunne Ranch looking north across summer pastures. Plum thicket in small hollow in foreground.

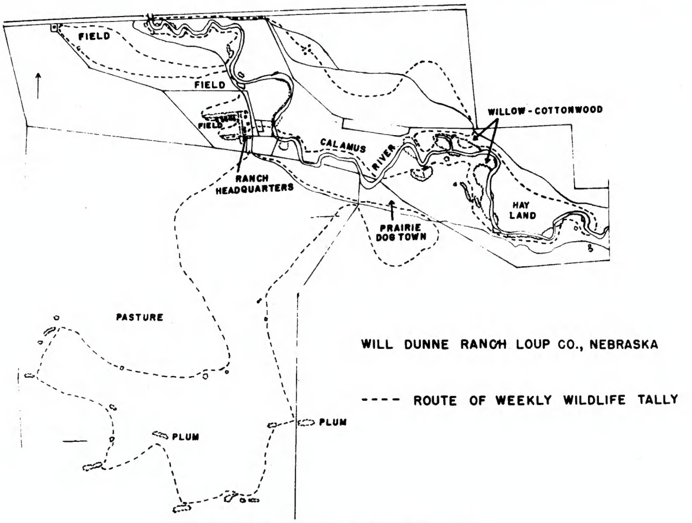

Fig. 4 Map of Dunne Ranch.

Other Bird Species

Other conspicuous birds that were regularly tallied on the ranch are listed in Table 2. Sandhill Cranes passed over each April and October. Killdeers were a summer resident that nested in the meadows and led downy young to more open grass. The Great Blue Heron was regularly seen, but nested in a large cottonwood grove many miles north. Hawks were usually passage residents, but Marsh Hawks nested in the hay meadows. The Black-billed Magpie was a resident which nested in both willow and plum thickets. Burrowing Owls nested in the vacant dens of a large Prairie Dog town, but were a summer resident only. The Meadow Lark was a summer resident nesting in abundance in hills and meadow with peak populations during spring and fall migration. The Horned Lark was a permanent resident, but each winter severe weather of February and March forced great numbers south, increasing by many fold the usual numbers seen in the area.

The records of nests noted in 1943 are given in Table 3. Mourning Dove nesting was high and the success was about 50% which was similar to that noted at Ord and in Iowa (McClure 1946). Success of the other species listed appears high because of the method of observation. Most nests were discovered when parents were seen carrying food to young, hence earlier losses of nests and eggs were not observed.

Other Vertebrates

Diurnal mammals were recorded at the ranch whenever seen. A large prairie dog town was on a dry plateau to the south of the river. Here the numbers seen reflected the seasons and the temperature rather than the numbers in the town. They were most conspicuously on the surface in May and September. Cottontail rabbits

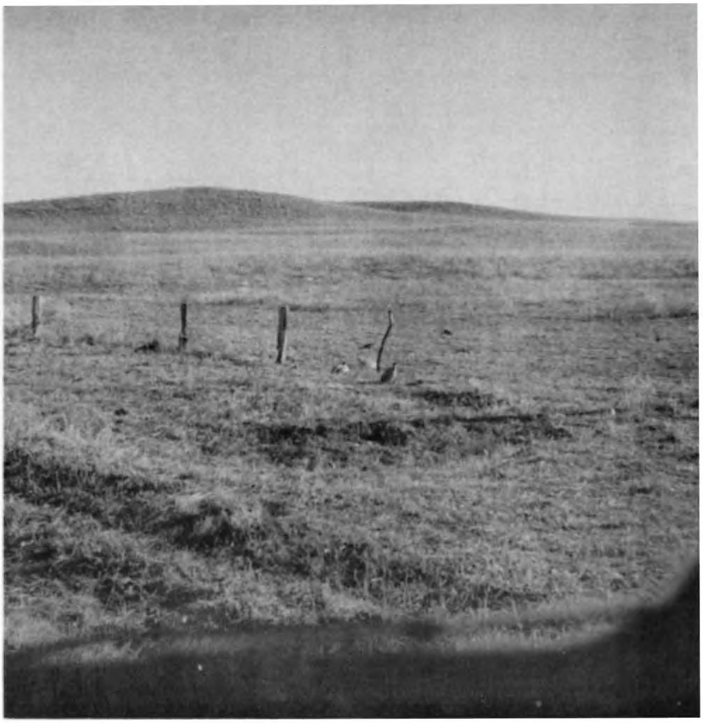

Fig. 5 Sharp-tailed Grouse at a stamping ground. Photographed from the window of a field truck.

made use of the windbreaks and of the willow beds in the valley. They were rarely seen back in the hills and were tallied most often in the winter and spring when there was less cover to hide them. Both the Black-tailed and White-tailed Jack Rabbits were resident, but the Black-tailed was much more abundant. Both species were most evident in the months of little vegetation cover. Coyotes were most often seen in fall and early winter.

Turtles were most often seen in the spring months than at other seasons. This was probably related to their movement from hibernaculae as was the movement of salamanders seen in the Valentine Refuge in March 1942 (McClure 1943).

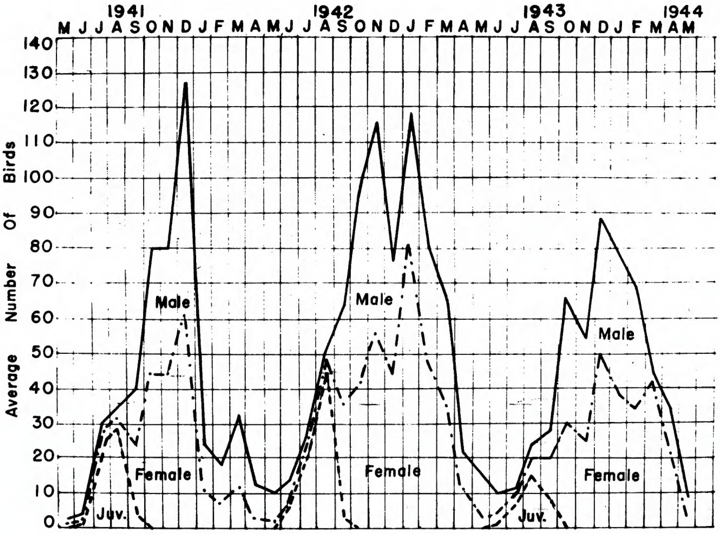

Fig. 6 Seasonal abundance of pheasants.

Roadside Tallies

The numbers of conspicuous birds seen while driving from Burwell to the Valentine Refuge and back each week are listed in Table 5. In earlier discussions of Nebraska's birds (see Bibliography) various facets of these observations have been mentioned. The figures given are about what could be expected to be seen in travel through the sandhills by the major roads, which were all gravel or sand at the time (Fig. 7) at a speed of less than 45 miles per hour. Comparing species in Tables 1 and 2 with those listed in Table 5 will show that seasonal trends were the same in most instances.

List of Writer's Papers Related to Nebraska Fauna

McClure, H. Elliott. 1944. Censusing pheasants by detonations. Journ. Wildl. Mgt., 8:61-65.

__________. 1945. Comparison of census methods for pheasants in Nebraska. Journ. Wildl. Mgt., 8:38-45.

__________. 1943. Salamanders and snow. Ecology 24:265-266.

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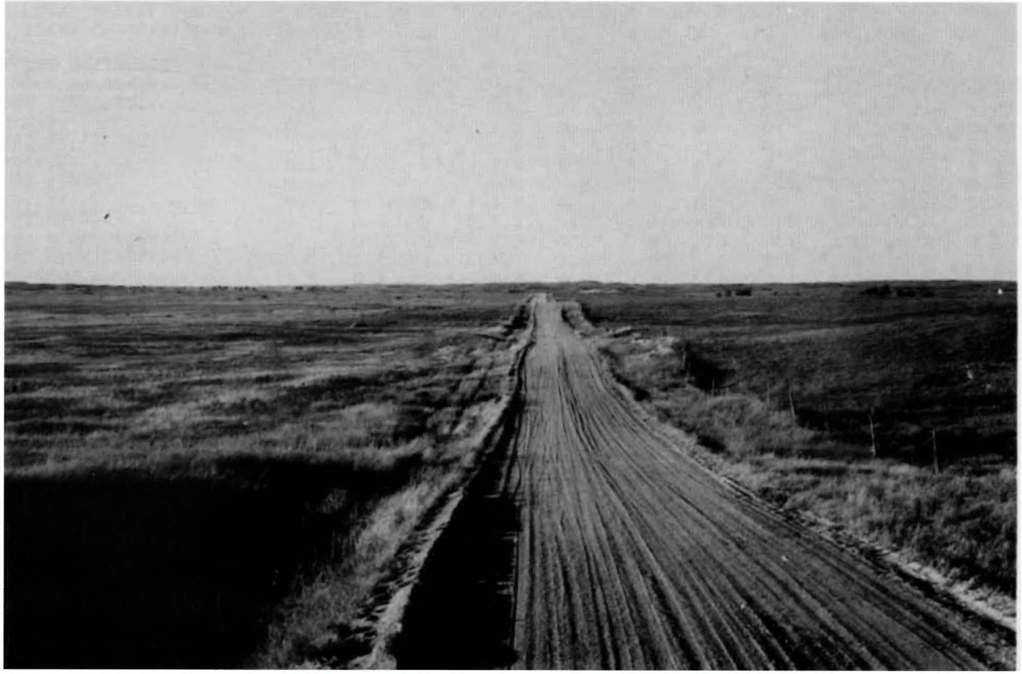

Fig. 7 A Nebraska sandhill highway in 1941.

TABLE 1. Seasonal appearance of game birds on the Dunne Ranch, Loup Co., Nebraska, as tallied along a 15-mile route from horseback, May 1941 through May 1944.

	Average Number Counted each Observation											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ring-necked Pheasant *Phasianus colochicus*	82.5	60.2	51.7	22.1	8.3	9.0	24.0	35.7	39.0	80.8	85.0	91.0
Prairie Chicken *Tympanuchus cupido*	15.0	3.5	10.0	3.7	.6	.8	2.7	.25	1.8	9.8	49.0	25.0
Sharp-tailed Grouse *Pedioecetes phasianellus*	15.6	26.0	19.3	3.0	.3	.24	3.5	2.5	1.4	3.0	6.0	8.4
Bob-white Quail *Colinus virginianus*	3.0	3.0	0	.7	.4	.4	0	3.4	0	4.0	8.2	10.0
Chukar (released) *Alectoris graeca*	6.8	14.0	16.3	18.2	13.2	12.5	13.0	11.7	9.0	17.4	16.7	18.2
Mourning Dove *Zenaidura macroura*	0	0	0	4.3	10.4	8.0	15.0	21.0	21.7	1.5	0	0
Common Snipe *Capella gallinago*	0	0	0	.7	0	.5	2.2	0	0	1.2	.3	.3
Upland Plover *Bartramia longicauda*	0	0	0	0	2.2	3.2	1.4	0	0	0	0	0
Mallard *Anas platyrhynchos*	2.5	6.2	25.0	5.4	2.0	3.5	.7	.5	2.6	6.2	26.4	12.5
Blue-winged Teal *Anas discors*	0	0	6.3	5.3	5.7	.9	.4	.2	7.5	8.3	4.0	.7
Pintail *Anas acuta*	0	0	14.3	3.3	0	0	0	0	0	0	0	0
Shoveler *Spatula clypeata*	0	0	3.3	1.4	0	0	0	0	0	0	0	0
Gadwall *Anas strepera*	0	0	.3	1.2	0	0	0	0	0	0	0	0
Common Merganser *Mergus merganser*	.3	3.3	3.7	4.0	0	0	0	0	0	0	0	0
Total Observations	6	5	7	10	13	12	11	13	11	14	8	6

TABLE 2. Other species of birds regularly tallied at the Dunne Ranch.

	Average Number Counted each Observation											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Sandhill Crane *Grus canadensis*	0	0	0	60.1	0	0	0	0	0	57.0	0	0
Killdeer *Charadrius vociferus*	0	0	.7	1.8	1.8	1.2	1.3	1.0	0	1.2	0	0
Great Blue Heron *Ardea herodias*	0	0	0	1.2	.7	1.0	.7	.3	.4	0	0	0
Crow *Corvus brachyrhynchos*	23.0	21.4	34.7	121.6	5.4	5.0	8.3	9.0	253.0	180.0	39.3	14.4
Rough-legged Hawk *Buteo lagopus*	1.3	.7	1.1	.7	0	.2	0	0	.4	.9	.7	1.2
Marsh Hawk *Circus cyaneus*	.8	2.2	1.7	1.6	1.0	.4	.6	.7	1.9	2.8	2.1	.8
Black-crowned Night Heron *Nycticorax nycticorax*	0	0	0	.3	.2	.5	.3	0	0	.4	0	0
Robin *Turdus migratorius*	0	0	0	.8	0	0	0	0	0	5.4	2.0	0
Black-billed Magpie *Pica pica*	5.4	5.8	6.1	1.3	.8	.9	2.0	.5	3.2	5.1	5.0	14.2
Golden Eagle *Aquila chrysaetos*	1.0	0	.3	0	0	0	0	0	0	.6	1.0	.8
Burrowing Owl *Speotyto cunicularia*	0	0	0	3.3	5.2	10.2	17.4	14.2	6.3	.7	0	0
Sparrow Hawk *Falco sparverius*	0	0	0	.6	4.0	.7	1.0	1.0	1.8	0	0	0
Barn Swallow *Hirundo rustica*	0	0	0	2.3	0	.5	1.1	10.0	2.0	0	0	0
Meadow Lark *Sturnella neglecta*	0	0	7.3	69.4	51.4	48.0	66.0	72.2	44.6	31.0	1.0	1.0
Horned Lark *Eremophila alpestris*	3.3	117.0	109.1	24.1	30.2	27.5	34.3	25.0	16.0	52.0	12.3	18.7

Species	Nest Location	Total Successful Nests	Nests by Month May	Jun	Jul	Aug	Sep	Total Nests
Mourning Dove	Cottonwood	17		3	5	12	8	28
Zenaidura macroura	Plum	3			1	5		6
	Apple	1			2			2
	Elm	3		2	1	1	2	6
	Box Elder	0				1		1
	Honey Locust	1				2		2
	Austrian Pine	0				1		1
	Total	25		5	9	22	10	46
Blue Grosbeak *Guiraca caerulea*	Plum	3				3		3
Grasshopper Sparrow *Ammodramus savannarum*	Grass	1		1				1
Lark Sparrow *Chondestes grammacus*	Grass	1			1			1
Meadow Lark *Sturnella neglecta*	Grass	1		1				1
Common Grackle	Plum	1		1				1
Quiscalus quiscula	Cottonwood	1			1			1
Crow *Corvus brachyrhynchos*	Plum	2	1	1				2
Black-billed Magpie *Pica pica*	Plum	1		1				1
Brown Thrasher *Toxostoma rufum*	Plum	1		1				1
Bell's Vireo *Vireo bellii*	Plum	2			2			2
Barn Swallow *Hirundo rustica*	Barn	2			1	1		2
Burrowing Owl *Speotyto cunicularia*	Prairiedog town	2			2			2

————. 1949. The eyeworm, *Oxyspirura petrowi*, in Nebraska pheasants. Journ. Wildl. Mgt., 13:303-307.

————. 1951. An analysis of animal victims on Nebraska's highways. Journ. Wildl. Mgt., 410-420.

McAtee, W. L. 1945. The Ring-necked Pheasant and its management in North America. The American Wildlife Inst., p. 203-233.

TABLE 4. Some other vertebrates regularly observed on the Dunne Ranch.

	Average Number Counted per Observation											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Prairie Dog *Cynomys ludovicianus*	12.5	4.7	19.6	14.0	52.0	19.4	23.6	26.4	48.0	30.0	22.0	21.4
Cottontail *Sylvilagus floridanus*	2.2	3.3	3.1	2.4	6.6	2.5	.3	1.0	.8	4.0	1.3	2.4
Black-tailed Jack Rabbit *Lepus californicus*	3.3	6.0	2.1	1.9	1.4	2.0	1.6	1.0	0	2.2	2.0	1.3
White-tailed Jack Rabbit *Lepus townsendii*	.3	1.3	.7	.6	.2	.8	0	1.0	1.0	1.0	.3	.7
Muskrat *Ondatra zibethica*	0	0	0	.5	1.3	.2	0	.2	0	0	0	0
Coyote *Canis latrans*	0	0	0	.4	0	0	0	.7	.4	.5	.7	.3
Striped Skunk *Mephitis mephitis*	0	0	0	0	0	.2	.2	.2	0	0	0	0
Soft Shelled Turtle *Trionyx ferox*	0	0	0	6.1	.5	1.0	0	0	1.0	0	0	0
Snapping Turtle *Chelydra serpentina*	0	0	0	.2	.7	0	0	0	0	0	0	0
Painted Turtle *Chrysemys picta*	0	0	1.3	1.3	0	0	0	0	0	0	0	0

TABLE 5. The average numbers of birds seen per day while driving along gravel roads of the Nebraska sandhills between Burwell and Valentine.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Marsh Hawk - *Circus cyaneus*												
1942	-	-	11.0	8.7	3.0	2.6	3.5	7.0	8.0	10.6	7.5	6.3
1943	3.6	4.0	7.2	6.0	3.8	2.5	5.0	3.6	5.8	7.0	3.6	2.4
1944	2.7	4.0	5.1	3.3	-	-	-	-	-	-	-	-
Ave.	3.1	4.0	7.8	6.0	3.4	2.6	4.2	5.3	6.9	8.8	5.6	4.3
Sparrow Hawk (Kestrel) - *Falco sparverius*												
1942	-	-	7.0	7.0	3.2	.7	3.3	13.3	12.2	.9	.2	0
1943	0	.1	1.6	10.4	1.5	1.0	3.4	9.7	14.0	3.5	.2	.2
1944	.3	0	.5	11.0	-	-	-	-	-	-	-	-
Ave.	.1	.1	3.0	9.5	2.3	.9	3.3	11.5	13.1	2.2	.2	.1
American Rough-legged Hawk - *Buteo lagopus*												
1942	-	-	1.0	0	.4	.1	.1	.5	0	1.9	1.0	4.0
1943	0	1.4	3.4	1.1	0	0	0	.1	.3	3.3	2.2	3.2
1944	2.8	2.8	1.5	1.0	-	-	-	-	-	-	-	-
Ave.	1.4	2.1	2.0	.7	.2	.1	.1	.3	.1	2.6	1.6	3.6
Ferruginous Rough-letted Hawk - *Buteo regalis*												
1942	-	-	0	0	0	0	0	0	0	0	1.7	3.0
1943	3.2	.6	.4	0	0	0	0	0	.1	.3	.4	0
1944	0	0	0	0	-	-	-	-	-	-	-	-
Ave.	3.2	.6	.4	0	0	0	0	0	.1	.3	1.0	1.5
Swainson Hawk - *Buteo swainsoni*												
1942	-	-	0	.5	2.0	1.3	2.5	3.0	1.6	1.1	.1	0
1943	0	0	0	2.6	3.3	1.5	2.2	3.6	3.3	1.3	.2	0
1944	0	0	0	3.3	-	-	-	-	-	-	-	-
Ave.	0	0	0	2.1	2.7	1.4	2.3	3.3	2.5	1.2	.1	0
Golden Eagle - *Aquila chrysaetos*												
1942	-	-	0	.2	.2	.2	0	0	0	0	.6	.7
1943	1.2	.7	.4	0	.1	0	.2	.1	0	.2	.4	1.2
1944	.8	1.7	.3	.1	-	-	-	-	-	-	-	-
Ave.	1.0	1.2	.35	.15	.15	.1	.1	.05	0	.1	.2	.6
Bald Eagle - *Haliaetus leucocephalus*												
1942	-	-	0	0	.6	0	0	0	0	0	0	0
1943	0	0	.1	0	0	0	0	0	0	0	.2	0
1944	.1	.1	0	.1	-	-	-	-	-	-	-	-
Total	.1	.1	.1	.1	.6	0	0	0	0	0	.2	0
Prairie Falcon - *Falco mexicanus*												
1942	-	-	0	0	.2	.1	.1	.3	.2	0	.7	.3
1943	.2	.2	0	.3	.1	0	.1	.3	.6	.7	.2	.4
1944	.2	.5	0	0	-	-	-	-	-	-	-	-
Ave.	.2	.35	0	.15	.15	.05	.1	.3	.4	.35	.45	.35
Loggerhead Shrike - *Lanius ludovicianus*												
1942	-	-	-	-	-	-	-	-	-	-	-	-
1943	0	0	.2	2.7	4.5	3.0	9.5	2.0	.6	0	0	.2
1944	0	0	.5	3.6	-	-	-	-	-	-	-	-
Ave.	0	0	.35	3.2	4.5	3.0	9.5	2.0	.6	0	0	.2

TABLE 5. (Cont.)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mourning Dove - *Zenaidura macroura*												
1942	-	-	1.0	4.0	25.0	51.4	89.3	83.0	6.0	.5	0	0
1943	0	0	0	2.7	48.6	62.0	84.1	87.1	12.3	.6	0	0
1944	0	0	0	5.5	-	-	-	-	-	-	-	-
Ave.	0	0	.5	4.1	36.8	56.7	86.7	85.0	9.1	.6	0	0
Upland Plover - *Bartramia longicauda*												
1942	-	-	0	0	0	.2	4.2	.3	0	0	0	0
1943	0	0	0	0	2.0	6.2	5.4	0	0	0	0	0
1944	0	0	0	0	-	-	-	-	-	-	-	-
Ave.	0	0	0	0	1.0	3.2	4.8	.2	0	0	0	0
Western Meadow Lark - *Sturnella neglecta*												
1942	-	-	-	-	-	-	-	-	-	117.9	0	.3
1943	0	.1	51.0	182.0	120.7	174.5	218.0	171.7	142.0	142.5	.4	0
1944	2.0	6.5	33.1	122.0	-	-	-	-	-	-	-	-
Ave.	1.0	3.3	42.0	152.0	120.7	174.5	218.0	171.7	142.0	130.2	.2	.2
Horned Lark - *Otocoris alpestris*												
1942	-	-	-	-	-	-	-	-	-	-	-	-
1943	126.2	115.0	140.4	106.3	59.0	101.9	150.7	88.0	35.4	118.4	1.8	8.0
1944	51.0	373.0	238.0	40.3	-	-	-	-	-	-	-	-
Ave.	88.6	244.0	189.2	73.3	59.0	101.9	150.7	88.0	35.4	118.4	1.8	8.0
Black-billed Magpie *Pica pica*												
1942	-	-	-	-	-	-	-	-	-	-	-	-
1943	-	3.4	3.2	1.0	.6	.5	1.0	.1	.3	6.1	2.8	2.0
1944	2.3	2.3	2.1	.5	-	-	-	-	-	-	-	-
Ave.	2.3	2.9	2.6	.7	.6	.5	1.0	.1	.3	6.1	2.8	2.0
Crow - *Corvus brachyrhynchos*												
1942	-	-	-	-	-	-	-	-	-	-	-	-
1943	241.0	93.6	298.4	459.0	25.5	28.4	46.0	79.0	53.3	489.0	11.0	261.4
1944	114.7	153.0	1154	713.0	-	-	-	-	-	-	-	-
Ave.	177.8	123.3	726.2	586.0	25.5	28.4	46.0	79.0	53.3	489.0	11.0	261.4

- No tally
0 None seen

FALL FIELD DAY

The 1600-acre Pressey Park Recreation Area, located on State Highway 21 and the South Loup River, was the site of the 1965 Fall Field Day, September 26. Twenty five people attended, with a little over a quarter of them camping in the Park and another group in a trailer. A pleasant interlude in September's rainy weather ended Friday night, with a drop below freezing, and the day itself was cold, with a light shower or two. Mr. Melvin Shafer and his committee from the ECO community (Eddyville, Callaway, Oconto) furnished guide service, and very welcome hot coffee at lunch and mid-morning (with rolls).

The fifty six species of birds identified within the county that day were: Double-crested Cormorant, Great Blue Heron; Red-tailed and Red-shouldered Hawks; Golden Eagle; Marsh and Sparrow Hawks; Prairie Chicken or Sharp-tailed Grouse, Gull species, Mourning Dove, Great Horned Owl, Belted Kingfisher; Flicker, Red-headed, Hairy, and Downy Woodpeckers; Eastern Phoebe, Empidonax species, Horned Lark, Blue Jay, Black-billed Magpie, Common Crow, Black-capped Chickadee, White-breasted Nuthatch; House and Rock Wrens; Brown Thrasher, Robin, Swainson's Thrush, Eastern Bluebird, Ruby-crowned Kinglet, Cedar Waxwing, Starling; Tennessee, Orange-crowned, Nashville, Myrtle, and Wilson's Warblers; American Redstart, House Sparrow, Western Meadowlark, Redwinged Blackbird, Cardinal, Pine Siskin, American Goldfinch, Rufous-sided Towhee; Grasshopper and Vesper Sparrows; Junco species; Clay-colored, Harris', White-crowned, White-throated, Lincoln's, and Song Sparrows.

The Cormorants were in a flock of about 130 that flew over the party, and the gulls in two large flocks that also flew over. Flocks of Franklin's Gulls were seen after the meeting near, but not in Custer County, and the Gulls almost certainly were Franklin's. The Grouse or Prairie Chickens were seen flying above a hill not too far from the road and could be identified by their size, and their flight pattern, but it was not yet light enough to tell which of the two they were.

CORRECTION TO 1965 SPRING REPORT

Delete the Purple Martin entry under Adams, South, and add April 6 - S for Purple Martin for Adams, Central.

Delete the White-winged Crossbill and add "F 13" for Common Redpoll under Adams, South.

BOOK REVIEWS

BIRD DISPLAY AND BEHAVIOR.—by Edward A. Armstrong. Dover Publications, Inc., New York, Reprint, 1965: 431 pp. $2.50

A book first published in 1942, revised in 1947, and reprinted with some revision in 1965 brings together some of the most important studies of bird behavior. It not only deals with bird behavior but, to a less extent, behavior of mammals including man. In addition to the very readable text, it presents a good bibliography to the date of the revised edition.

Anyone who is even slightly interested in the subject should have the book which is a good base for understanding other studies published more recently. Behavior is certainly one of the most recent and exciting approaches to bird study. Dover is doing a great service by making such works available.—Doris Gates

THE BIRDS OF SHAKESPEARE.—by James E. Harting. Argonaut Inc., Chicago, 1965: 321 pp. $7.50

For one who is interested in bird study and literature, the book is enjoyable and is probably one which would lend itself well as a book review for a program for a bird club meeting.—Doris Gates

GENERAL NOTES

GYRFALCON IN DAWES COUNTY.—November 27, 1965, a White Gyrfalcon flew to the top of a telephone post very close to our car and stayed there for several minutes. It was at the east end of Whitney Lake within sight of the lake. We thought it might have been an escaped bird but there was no sign of a band or furniture of a falconer. A letter from the U.S. Air Force Academy of Colorado Springs stated that they had not lost a bird.

According to the A.O.U. Check-list, 1957, *Falco rusticolus obsoletus* has been recorded in Johnson County, Nebraska, as well as other states in the mid-United States, even to Manhattan, Kansas. Four other people were in the car: Mrs. Marjorie Blinde, Mrs. Mary Peyton, Miss Ruth Gates, and Mrs. Jo Struempler.—Doris Gates, Chadron

DAKOTA COUNTY, MAY 30 THROUGH JUNE 4, 1965

I never see anything pertaining to Dakota County in the *Review,* but there are some very good birding areas there at certain times of the year. Last year I spent a short time in Emerson and took time off to do some birding and some botanizing. Here is a list of the birds I saw in one five-day period, to show that Dakota County is still on the map: Great Blue and Green Herons; Bittern species; Canada Goose, Mallard, Gadwall, Blue-winged Teal, Shoveller; Turkey Vulture, Cooper's Hawk, Prairie Falcon, Sparrow Hawk; Bobwhite, Ring-necked Pheasant; Sora, American Coot; Killdeer, Spotted and Solitary Sandpipers, Lesser Yellowlegs, Least Sandpiper, American Avocet; Rock and Mourning Doves; Screech and Burrowing Owls; Whip-poor-will, Common Nighthawk; Belted Kingfisher; Flicker, Red-headed and Downy Woodpeckers; Eastern Kingbird, Eastern Phoebe, Alder Flycatcher, Eastern Wood Pewee; Horned Lark; Barn Swallow; Blue Jay, Black-billed Magpie, Common Crow; House and Short-billed Marsh Wrens, Catbird, Brown Thrasher; Robin; Starling; Warbling Vireo; Yellow Warbler; Eastern Meadowlark, Red-winged Blackbird, Orchard Oriole, Common Grackle; Dickcissel, American Goldfinch, Vesper and Chipping Sparrows. I am still not positive about the Bittern. It had all the markings of an American Bittern, but it was only about twelve or so inches high. It could have been an immature.

—Mrs. H. J. Wagner, Colo. Spr., Colo.

EXCERPTS FROM LETTERS

On October 27 Mrs. Cortelyou and I saw some partial-albino Common Grackles in a flock of normal Grackles. There were three patterns of albinism: white in both of the wings and in the tail, white in the left wing and in the tail, and white in the tail only. Because of the time intervals between sightings and the relative locations in the flock we think there were two each of the first and last pattern, for a total of five partial albinos. One of the latter was subject to a long, close, chase by a normally colored bird. We don't know the cause of the chase, and saw no other indication that the odd birds were rejected in any way. I have seen partial albino Grackles at least once before, but never more than one at a time.

—R. G. Cortelyou, Omaha

In the center of our farm is a 65-acre basin which this year is well filled with water and covered with weeds and rushes. And for a large part of the way surrounding it I had a large milo field. It must have been the perfect setting for black birds because I estimate that 50,000 were living there before I harvested the milo. They were mostly Redwinged Blackbirds, with Common Grackles the next most numerous. Most of them have moved on, but a large number still roost in the weeds, coming in about sunset.

There were lots of ducks, and the most American Bitterns I've seen in years.

The Water Pipits fly over the basin in a seemingly endless stream now (November 22). I don't know where they are going as they don't seem to light, and they seem to be going in the same direction all the time.

—Lee Morris, Bradshaw

SOME SPRING MIGRANT AND BREEDING RECORDS FROM NORTHERN NEBRASKA

Lester L. Short, Jr.

From late May to July, 1965, I continued my investigations of hybridization and intergradation of birds along the Niobrara River. The spring season seemed unusually late this year in northern Nebraska, with heavy frost recorded through May 28 at Rushville in Sheridan County. This report concerns certain late migrants, and a few breeding records supplementing those of 1964 (Short, 1965). Field work was carried out within the period noted above at the following localities (the amount of time spent at each is given in parentheses):

1. Beaver Creek, ½ mile south of Niobrara River, 23 miles NNW Atkinson in Holt County (11 days).
2. Niobrara River, 20 miles WSW Valentine in Cherry County (12 days).
3. Niobrara River, 10½ miles S Rushville in Sheridan County (6 days).

Additionally, nine days were spent along the Missouri River in Cedar County, Nebraska, seven miles southeast of Yankton, South Dakota. Specimens collected during the investigation are deposited in the U. S. National Museum; specimen numbers referred to below are their U. S. National Museum (U.S.N.M.) numbers.

SYSTEMATIC LIST

Wood Duck, *Aix sponsa*. A lone male wood duck was observed feeding in a small marsh near the Niobrara River 20 miles west-southwest of Valentine on June 13, 1965. Wood ducks were otherwise seen only far to the east along the Niobrara River west of Niobrara in June, 1964, and along the Missouri River southeast of Yankton in Cedar County, Nebraska, in June, 1965.

Wood Thrush, *Hylocichla mustelina*. A singing male wood thrush was observed in dense woods beside a pond 20 miles west-southwest of Valentine on June 15, 1965. Wood Thrushes were previously reported in the breeding season along the Niobrara River west to 18½ miles northwest of Ainsworth (June, 1964), in central Nebraska at Halsey (Short, 1961) and in southern Nebraska along the Platte-South Platte River west to Sutherland (Short, *op. cit.*).

Swainson's Thrush, *Catharus ustulatus*. Migrant Swainson's thrushes were common to abundant all along the Niobrara River in late May of 1964 and 1965. In 1965 they were observed regularly along the Niobrara 23 miles north-northwest of Atkinson until June 9, and a lone bird was also seen there on June 11.

Philadelphia Vireo, *Vireo philadelphia*. I was surprised to encounter a Philadelphia vireo on May 29, 1965, in low ashes and boxelders near the Niobrara River south of Rushville in Sheridan County. The bird was feeding and moving about slowly, affording close observation for about 15 minutes. I carefully noted its eyestripe, pale yellow underparts, and the absence of wing bars. Its appearance this far west suggests that it may regularly migrate through central Nebraska.

Tennessee Warbler, *Vermivora peregrina*. Tennessee warblers were common and occasionally abundant at the eastern localities along the Niobrara River in late May of 1964 and 1965. They were common as far west as 20 miles west-southwest of Valentine from May 21-24, 1965. A single male was encountered May 30, 1965, 10½ miles south of Rushville in Sheridan County. This bird was taken (U.S. N.M. 481621) as it sang and fed 12 feet up in a cottonwood, in a small, isolated grove of cottonwoods back from the river. Its song was an odd, continuous warble lacking the typical inflection of this species' song. The specimen weighed 9.7 grams, had enlarged testes (5 x 3.5 mm) and a small cloacal protuberance, and lacked fat.

Magnolia Warbler, *Dendroica magnolia*). A single male magnolia warbler sang as it fed in a cottonwood south of Rushville in Sheridan County, on May 28, 1965. The bird (U.S.N.M. 481622) weighed 9.6 grams, had light fat and enlarged testes (5 x 3.5 mm) with no cloacal protuberance.

Myrtle and Audubon's Warbler, *Dendroica coronata*. Most warblers of this species observed in the western portion of the Niobrara Valley were Audubon's warblers. A late migration was noted May 27-29, 1965, south of Rushville in Sheridan County. All the birds observed in this period were Audubon's warblers, except for one adult male with a partial yellow throat that appeared to be a hybrid Myrtle x Audubon's warbler.

Blackpoll Warbler, *Dendroica striata*. Blackpolls were commonly observed in late May at all localities along the Niobrara River east of Cherry County. The westernmost occurrences were one bird each at 20 miles west-southwest of Valentine on on May 23, 1965 and 14½ miles southwest of Merriman on May 30, 1964.

Mourning Warbler, *Oporornis philadelphia*. Several mourning warblers were observed in late May, 1965, along the Niobrara River 20 miles west-southwest of Valentine. One of these, glimpsed but briefly, appeared to have white about its eyes, but I was reluctant to call it a MacGillivray's warbler (*O. tolmiei*). A single mourning warbler was observed and collected south of Rushville in Sheridan County on May 27, 1965. This bird, a male (U.S.N.M. 481623) with enlarged testes (7 x 5 mm), weighed 14.7 grams. If this species is, indeed, of more frequent occurrence in western Nebraska than MacGillivray's warbler, it is difficult to explain why only MacGillivray's warblers have been recorded just to the north in the Black Hills (Pettingill and Whitney, 1965).

Western Tanager, *Piranga ludoviciana*. A group of three male western tanagers was observed May 29, 1965, along the Niobrara River south of Rushville in Sheridan County. The birds were flycatching from branches of boxelders and ashes on a slope. One male (U.S.N.M. 481627) was collected as it chased a female cowbird (*Molothrus ater*) from an ash into a cottonwood. The specimen weighed 32.6 grams, had very light fat, and enlarged testes (9 x 6 mm). The occurrence of migrant western tanagers along the Niobrara is noteworthy, as the closely related scarlet tanager (*P. olivacea*) breeds west along the Niobrara to 20 miles west-southwest of Valentine, about 100 miles east of where these western tanagers were observed.

White-crowned Sparrow, *Zonotrichia leucophrys*. As late as May 27, 1965, a single white-crowned sparrow was noted with a flock of chipping sparrows (*Spizella passerina*) and clay-colored sparrows (*S. pallida*) along the Niobrara River south of Rushville in Sheridan County.

Clay-colored Sparrow, *Spizella pallida*. Small flocks of clay-colored sparrows were noted 20 miles west-southwest of Valentine in Cherry County and south of Rushville in Sheridan County in late May, 1965. These flocks were primarily associated with chipping sparrows (*S. passerina*). Three female specimens were secured, two 20 miles west-southwest of Valentine on May 24, 1965, and one May 27, 1965, south of Rushville. The former

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two (U.S.N.M. 481624, 481625) each had an enlarged ovary with tiny ova and moderate fat. They weighed 12.1 and 12.6 grams, respectively. The Rushville bird (U.S.N.M. 481626) weighed 12.5 grams, and had a very large ovary (8 x 5 mm) and heavy fat.

Chestnut-collared Longspur, *Calcarius ornatus*. Two apparently mated pairs of these longspurs were noted June 17, 1965, in a field in hills north of the Niobrara River 20 miles west-southwest of Valentine.

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Bureau of Sport Fisheries and Wildlife, Department of the Interior, U.S. National Museum, Washington, D.C.

AUGUST EICHE, 1870-1965

August Eiche, an honorary member of the Nebraska Ornithologists' Union, died in Lincoln December 11, 1965, at the age of 95.

In addition to prominence in business, civic, and fraternal affairs, Mr. Eiche was a noted ornithologist and held several offices in the NOU in the 1900's. He received an honorary degree in ornithology from the University of Nebraska and was an honorary bird curator. His collection of birds, including all species of wild ducks in North America and four species of whooping cranes, was given to the University in 1926.

EDGAR D. WIEDER 1900 - 1965

Nebraska lost an outstanding naturalist with the November 7th death of Edgar D. Wieder of North Platte, Nebraska. During his years as an employee of a Public Power System he learned to know and love Nebraska as few do. As an amateur photographer he preserved on film the wild flowers of the state. His collection of slides is, perhaps, unparalleled in the state.

Not content to capture natural beauty on film he shared his love of nature with his fellows in illustrated lectures that brought nature alive for the novice and the expert. He and his teenage helper, Steve Luna, brought the story of Nebraska wild flowers to audiences across the state.

Having pretty well completed the wild flower series he was just beginning a series of bird and animal photographs when he was called away.

He was a man of whom his friends could say "My life is fuller because I knew him."

—*Glenn Viehmeyer, Margaret Morton*

Those who attended the Ogallala meeting will recall his talk there.

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Treasurer's Report -- 1965

	Cash	Invest-ments		Total Assets
Balance, January 1, 1965	$233.46	$1,149.00		$1,382.46
Current Operations - Receipts				
Memberships 38 Sustaining	190.00			
161 Active	483.00		$673.00	
Subscriptions 20 Direct	70.00			
12 Agency	36.00			
2 Foreign	6.33		112.33	
Interest Received - cash	35.54			
- to account		18.18	53.72	
Total current receipts			$839.05	
Current Operations- Expenditures				
Printing Review - January	230.00			
April	90.00			
July	160.00			
October	177.00		657.00	
Officer's Expenses-				
Doris Gates	13.17			
Lee Morris	6.80			
R. G. Cortelyou	57.21			
Ruth Wensien	72.90			
Bertha Winter	17.97			
G. W. Keim	3.00		171.05	
Loss on convention	67.95		67.95	
Miscellaneous - State Permit	3.00			
Fidelity Bond	10.00			
Dues notices	26.00			
Bank charge	.50			
Honorary membership certificate	12.50			
Addressing machine and supplies	50.73		102.73	
Total current expenditures			998.73	
Loss on current operations				(159.68)
Other operations				
Increase in prepaid memberships and subscriptions	$406.17		$406.17	
Occasional papers sold	108.80			
Paid to Wm. Youngworth	(25.00)		83.80	
Field cards sold	21.80		21.80	
Decals bought	(70.00)			
less sales	37.50		(32.50)	
Recepts from other operations				479.27
Investment transfered to cash	49.00	(49.00)		
Balance, December 31, 1965	583.87	1,118.18		1,702.05

PROGRESS REPORT ON THE PRAIRIE GROUSE NESTING STUDY IN THE NEBRASKA SANDHILLS[1]

Lawrence J. Blus and Jerry A. Walker

Two of the more important needs in the management of the plains Sharp-tailed Grouse (*Pedioecetes phasianellus jamesi*) and the Greater Prairie Chicken (*Tympanuchus cupido pinnatus*) are methods for accurately determining reproductive success during the summer and methods of evaluating nesting cover. Since the intensive study of these prairie grouse was initiated in the Nebraska Sandhills in 1958, two of the principal purposes have been to develop means of meeting these needs. Our progress toward attaining these objectives through a nesting study is summarized in this paper along with other pertinent data.

METHODS

As a potential method of determining productivity, randomly selected areas were walked in an effort to locate all prairie grouse nests. Variations in this searching method were tried; the interval between searchers was varied from 6 to 12 feet and from one to eight searchers were employed. Walking sticks were used to facilitate the search, and during 1961, a rope was dragged between investigators. Searching was conducted within the period May 8 through July 13 each year. Since 1959, a reward of $1.00 to $3.00 was offered for each nest reported from local study areas. During 1964, a reward was in effect throughout Blaine and Thomas counties. Once located, nests were usually visited once a week in order to determine progress. During 1964, the 3-step Method (Parker and Harris, 1959) was used to sample nesting cover. Modifications of the 3-Step Method included measurement of certain plants hit and recording all hits on growth from previous growing seasons (GPGS) which were 3 inches or more in height as well as that of the current growing season (GCGS). Range analysis based on quantitative ecology as described by Dyksterhuis (1949) was also utilized and range management terms used are those described by him.

THE STUDY AREAS

The study areas are located in the Sandhills which are comprised of 20,000 square miles in the north central portion of the State. The Sandhills are characterized by alternating ridges and valleys on which is supported a postclimax of tall grasses which occur some distance from their proper climate due to the relatively high chresard (Weaver and Clements, 1938). Because of the susceptibility of most of the Sandhills soils (principally wind-blown dune sands) to eolian erosion, only about 5 per cent of this area is devoted to cultivated crops, chiefly alfalfa (*Medicago sativa*) and other tame hay. The average annual rainfall varies from 21 inches in the east to 17 inches in the west; approximately 70 per cent of the moisture is recorded during the growing season, April through September. The altitude varies from approximately 2000 feet in the east to about 4000 feet in the west. The Sandhills support an economy based on cattle grazing. The mean size of land holdings in this area was approximately 3000 acres in 1959.

Nesting data from 1959 through 1961 were collected from two study areas near Burwell. Each of these is comprised of one township, one lying in northwestern Garfield and southwestern Holt counties (Swan Lake Area) and the other in eastern Loup County (Loup County Area). Data from 1962 through 1964 were collected in Thomas and Blaine counties on the Bessey Division of the Nebraska National Forest, which is comprised of 140 square miles. To augment the data, nests located outside the study areas were included in this report. The characteristics of the various study areas differed to some extent. The National Forest is characterized by large hills and narrow valleys; lack of cultivated crops; mowing of about 1 per cent of the land area; and conservative stocking rates which result in most range being in excellent or good condition. The Swan Lake Area near Burwell is characterized by much level terrain and mowing of 45 per cent of the land area. The Loup County Study Area, also near Burwell, is characterized by both large hills and level terrain and mowing of about 15 per cent of the land area. On both the areas near Burwell, the stocking rates are less conservative than those on the Forest with the result that overgrazing is relatively common. In addition, a small amount of land is cultivated on both these areas.

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[1] This paper represents a contribution from Nebraska Pittman-Robertson Project W-33-R, "Studies in the Ecology and Management of Prairie Grouse".

NEST SEARCHING

On 1041 acres searched during this study, six prairie grouse nests were located, indicating a density of one nest per 174 acres. Of these, only one proved successful. The number of nests found per square mile was less than the spring density of displaying males (extremes of 60 and 120 acres per male). This was in agreement with Ammann (1957) who found that cocks normally exceed hens in prairie grouse populations. In addition, the low nest density was partially attributable to the nonrandom distribution of nests and to probable failure of some hens to breed. One of the few studies reporting densities of grouse nests was that of Baker (1953) who found 16 nests of the Greater Prairie Chicken in 610 acres in Kansas by use of a flushing device mounted on a vehicle. Schwartz (1945) reported local concentrations of Prairie Chicken nests in certain types of cover in Missouri with the greatest density being seven nests in 15 acres of sweetclover.

FATE OF NESTS

Although it seemed impossible to measure prairie grouse productivity through the nest search method, important data concerning other aspects of grouse nesting were obtained. Of 67 nests for which fates are known, (5 additional clutches collected and fate of 1 clutch undetermined), 33 (49.3 per cent) hatched (Table 1). The success of nests was comparable to the 44-per cent success summarized from several studies for both the Sharptail and Prairie Chicken (Ammann, 1957). The per cent of eggs which hatched in successful Prairie Chicken nests was 85.4 compared to 95.5 for the Sharptail (Table 2). The relatively low percentage of hatch of Prairie Chicken eggs was due in part to accidental destruction of 10 eggs by a hen (Blus, 1965). The principal agent of nest destruction was predation which accounted for 38.8 per cent of 67 nests. Striped skunks (*Mephitis mephitis*), coyotes (*Canis latrans*), badgers (*Taxidea taxus*), bullsnakes (*Pituophis sayi*), and thirteen-lined ground squirrels (*Citellus tridecemlineatus*) were common in nearly all types of habitat in the Sandhills and were probably responsible for most nest predation. The principal reason for abandonment was mowing, although this factor was of local importance as mowing of native hay is initiated in July well after the hatching peak.

CLUTCH SIZE

The number of eggs in 20 Prairie Chicken clutches varied from 8 to 17 with an average of 13.3 while the average size of 28 completed Sharptail clutches was 11.7 with a range of 7 to 15 (Table 2). These clutch sizes are comparable to those summarized for several states by Ammann (1957) except that the average clutch of the Prairie Chicken is rather high. The average number of chicks leaving hatched nests was 10.8

Table 1. Fate of 67 prairie grouse nests, 1959 through 1964.

Fate	Prairie Chicken Number of nests	Prairie Chicken Per cent of total	Sharp-tailed Grouse Number of nests	Sharp-tailed Grouse Per cent of total	Both species Number of nests	Both species Per cent of total
Abandoned						
Undetermined			1	2.5	1	1.5
Vehicle			1	2.5	1	1.5
Livestock	1	3.7			1	1.5
Mowing	1	3.7	4	10.0	5	7.5
Subtotals	2	7.4	6	15.0	8	12.0
Preyed upon						
Ground squirrel	1	3.7	1	2.5	2	3.0
Snake			3	7.5	3	4.4
Carnivorous mammals	6	22.2	10	25.0	16	23.9
Undetermined	3	11.1	2	5.0	5	7.5
Subtotals	10	37.0	16	40.0	26	38.8
Hatched	15	55.6	18	45.0	33	49.2
Totals	27	100.0	40	100.0	67	100.0

Table 2. Prairie grouse nesting data, 1959 through 1964.

Species	Eggs per clutch Average	Eggs per clutch Range	Per cent of eggs hatching in successful nests	Average number of chicks per brood
Sharp-tailed Grouse	11.7	7-15	95.5	11.9
Prairie Chicken	13.3	8-17	85.4	10.8
Averages	12.4	----	91.7	11.5

for the Prairie Chicken and 11.9 for the Sharptail (Table 2).

HATCHING PERIOD

The hatching period in prairie grouse is relatively brief as indicated by 32 of 34 hatching dates occurring during the first 3 weeks of June with 27 of these occurring during the first 2 weeks of June (Fig. 1). Although renesting may be difficult to determine, it was thought that 6 of the 73 nests located were renesting attempts as these were conspicuously later in the season than most nests. These accounted for 8.2 per cent of all nests and only 2.3 per cent of the chicks produced in 34 nests. Of the apparent renests, three of the hens were killed, two by mowing and another by a carnivorous

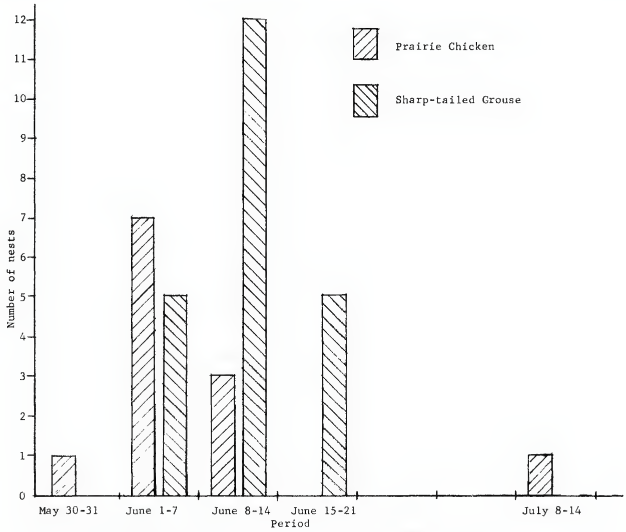

Figure 1. Hatching dates of 34 prairie grouse nests, 1959 through 1964

mammal. There seemed less eggs in renesting attempts (27 eggs in 3 completed clutches), but the sample was too small to determine the uniformity of this decrease.

The relatively short period of sexual activity indicated that, as in Michigan (Ammann, 1957), reproductive success of prairie grouse in the Sandhills is dependent upon the success of initial nesting efforts as prairie grouse hens are unpersistent renesters (Hamerstrom, 1939; Cartwright, 1944). This may be partially explained by the fact that breeding seldom, if ever, occurs after seasonal termination of sexual display by males in early June. In southern Illinois where large numbers of nests are broken up early in the season, renesting by Prairie Chickens is of common occurrence (Yeatter, 1943).

NESTING COVER

Several factors seemed to influence selection of the nest site. Of apparent importance was the presence of fairly dense vegetative cover which contained some growth of the previous seasons (GPGS). Little growth of the current season (GCGS) was present in late April and early May when most nests were constructed. The analysis of nesting cover was carried out near the hatching period when vegetation had advanced considerably in phenology from the period of initial nesting activity. GPGS over 3 inches comprised from 4.8 to 28.0 per cent of the total hits on vegetation encountered in 23 3-Step transects. The height of the nesting cover varied from 3.7 to 9.0 inches with an average of slightly over 5 inches.

The principle plant species forming a canopy (3 inches or more in height) of cover over grouse nests (Table 3) were sand lovegrass (*Eragrostis trichodes*), little bluestem (*Andropogon scoparius*), and prairie sandreed (*Calamovilfa longifolia*). The importance of these three grasses for nesting cover was probably due to their persisting through the winter and spring nearly intact. Little bluestem

Table 3. Frequency index of plant species forming a canopy over nests of 27 Sharp-tailed Grouse and 3 Prairie Chickens, 1962 through 1964.

Species	Sharp-tailed Grouse		Prairie Chicken		Both species	
	Number of nests	Frequency index	Number of nests	Frequency index	Number of nests	Frequency index
Andropogon scoparius	14	51.9	2	66.7	16	53.3
Eragrostis trichodes	13	48.2	2	66.7	15	50.0
Calamovilfa longifolia	9	33.3			9	30.0
Rosa spp.	5	18.5			5	16.7
Yucca glauca	3	11.1			3	10.0
Panicum virgatum	3	11.1			3	10.0
Prunus besseyi	3	11.1			3	10.0
Stipa comata	2	7.4	1	33.3	3	10.0
Amorpha canescens	2	7.4			2	6.7
Andropogon hallii	2	7.4			2	6.7
Sporobolus cryptandrus	1	3.7	1	33.3	2	6.7
Helianthus laetiflorus	1	3.7			1	3.3
Psoralea lanceolata	1	3.7			1	3.3
Cyperus schweinitzii	1	3.7			1	3.3
Erigeron canadensis	1	3.7			1	3.3

comprised 29.4 per cent of GPGS encountered in 21 3-Step transects read around Sharptail nests, while sandreed comprised 18.1 per cent, and lovegrass 10.6 per cent. The principal species recorded on transects around Sharptail nests were little bluestem, prairie sandreed, sand lovegrass, sedges (*Carex* spp. and *Cyperus schweinitzii*), sand dropseed (*Sporobolus cryptandrus*), hairy grama (*Bouteloua hirsuta*), and sand bluestem (*Andropogon hallii*). Several abundant species including sedges, hairy grama, and sand dropseed, were unimportant as nesting cover primarily because of insufficient height, growth habit, and other factors. Bunches of sand lovegrass or little bluestem commonly comprised all the cover for a nest; whereas, sod-forming grasses such as sandreed and sand

bluestem were rarely found to constitute the entire complement of nest cover. Except for shorter shrubs such as rose (*Rosa* spp.) and sand cherry (*Prunus besseyi*), woody plants were not recorded as nesting cover. Thickets of chokecherry (*Prunus virginiana*) and wild plum (*Prunus americana*) as well as windbreaks of red cedar (*Juniperus virginiana*) and other planted species are relatively common in the Sandhills. The lack of records of Sharptail nests in woody cover is in contrast to studies in Michigan where Ammann (1957) reported that nests are usually located in certain types of woody cover.

Three of the Sharptail nests were located in alfalfa and one Prairie Chicken nest in smooth brome (*Bromus inermis*) and sweetclover (*Melilotus* sp.). All of these nests were located on or near the study areas near Burwell. The three nests in alfalfa were reportedly destroyed by mowing in one field. There were no reports of grouse nesting in alfalfa or other tame hay near the Forest, although effort was extended in contacting ranchers about this matter in 1964.

GRAZING AND MOWING

Grouse nests were usually observed in native prairie on which little or no grazing had occurred. A total of 15.5 per cent of nests were located in prairie which was free of any use by man for at least 2 years in succession. It was thought that less than 1 per cent of the the Sandhills prairie remains unused for such a lengthy period. With the exception of one nest located in fair condition range, all nests found in 1962 through 1964 were located in excellent condition (73.3 per cent) and good condition range (23.4 per cent). According to Bredemeier (1963), 80 per cent of the Sandhills range is classified in the excellent and good condition classes. From this figure, quality nesting cover is apparently in good supply over much of this area. It was thought that proper grazing use improved nesting cover for grouse on the study areas near Burwell (Schwilling, 1960) as most nests were located in range which was classified as being grazed at a full degree of use. However, it should be pointed out that 13.3 per cent of nests at Burwell were located in unused range which indicated that the best available cover was used. Of nest sites on or near the Burwell areas and Forest, 61.5 per cent and 14.3 per cent, respectively, were recorded as undergoing full or close grazing use. There were no records of nest sites in range which was undergoing severe or extreme grazing use.

The fair condition range used for nesting supported a dense growth of vegetation since mowing occurred the previous July 1. The regrowth in this mowed area was in contrast to sparse regrowth of that native vegetation which is mowed for hay later in the summer. The practice of mowing includes approximately one-eighth of the Sandhills (Blus, 1963) and occurs primarily in areas with little variance in physiography. Apparently, mowed areas with little regrowth are used as a last resort for nesting, but probably provide adequate cover for renesting attempts later in the spring. On one of the Burwell areas, a Sharptail nest was located in mowed prairie in early spring. The sparse vegetation provided a minimum of cover for the hen whose nest was destroyed by a carnivorous mammal.

Of the vegetative types in the Sandhills prairie, those resembling the undisturbed postclimax seem most fully to meet the requirements for prairie grouse nesting cover. The selection of these types for nesting seems related to the density of residual cover at the time of nest construction. The fact that grouse nested in cultivated fields and mowed areas in the Sandhills may indicate a lack of suitable nesting cover in local areas or that plant phenology advanced to a degree where adequate cover was provided by the GCGS. Studies in other localities have indicated that the Prairie Chicken commonly nests in cultivated grasses and crops (Schwartz, 1945; Yeatter, 1943), and that the Sharptail has adapted to nesting in alfalfa and wheat stubble (Hart, Lee, and low, 1950).

In regard to the Prairie Chicken, winter food shortages limit populations in most of the Sandhills. The primary chicken range is located on the southern and eastern borders of the Sandhills where grain is available. In these areas, a greater proportion of the range is overgrazed than that located in the interior of the Sandhills (Blus, 1963) which corresponds roughly to the primary Sharptail range. Thus, nesting cover in the primary chicken range is probably of a lower quality than that existing in those regions where grain is lacking. This situation applies to some extent to the study areas near Burwell where overgrazing and overmowing are the the rule rather than the exception. Prairie Chicken males make up about 25 to 30 per cent of the spring population of displaying males on the Loup County Area and 80 to 90 per cent on the Swan Lake Area. In contrast, about 1 per cent of males on the Forest are Prairie Chickens. The occurrence of Chickens on these areas seems related to the availability of grain; some grain crops are present on the Burwell areas and none are planted on the Forest. In addition to most nests being located in a lower quality of range on the Burwell areas, a lower hatching success was also suggested. A total of 40.0 per cent of the 35 grouse nests hatched on the study areas near Burwell, while 61.3 per cent of the 31 nests were successful on or near the Forest. The importance of cover to nesting success, and in turn, to grouse populations, is not entirely clear. These birds must utilize available cover for nesting, regardless of its quality, as indications are that hens of both species ordinarily travel but a short distance from the place of breeding to the nest site (Hamerstrom, 1939).

PHYSIOGRAPHY

Most nests located on or near the Forest (77.4 per cent) were located on north and east slopes of large hills. The selection of these areas seemed related to a denser cover of vegetation and litter and the cooler, moister microclimate. Grouse often loaf in these areas on warm days, and apparently seek out such sites for nesting. Nests in the vicinity of the Forest were found on level terrain and slopes (estimated at 10 per cent levels) up to 40 to 50 per cent with 32.3 of these estimated at 21 to 30 per cent. The selection of slopes for nest sites also seemed related to grazing patterns of cattle; that is, valleys in the Sandhills range are usually grazed first as these are most accessible. Although nests were found in level areas, none were located in the narrow valleys which are characteristic of those parts of the Sandhills which contain large hills.

SUMMARY

This study is concerned with nesting of the Greater Prairie Chicken and the Plains Sharp-tailed Grouse in several areas of the Nebraska Sandhills during 1959 through 1964.

A total of 1041 acres was searched afoot for prairie grouse nests; six nests were found in the sampled area which indicated a density of one nest per 173 acres.

Of 67 nests observed, 33 hatched for a success of 49.3 per cent. Predation accounted for destruction of 38.8 per cent of the 67 nests. Mowing was of local importance in nest destruction.

Completed Prairie Chicken clutches varied from 8 to 17 with an average of 13.3, while the average Sharptail clutch was 11.7 with a range of 7 to 15.

The peak of hatching occurred during the first two weeks of June. A total of 27 of 34 hatching dates were recorded during that period; 32 of these occurred during the first three weeks of June. Apparent renesting accounted for 8.2 per cent of all nests and 2.3 per cent of chicks produced.

Most nests were located in fairly dense vegetation which contained some growth of the previous growing seasons (GPGS). Growth of current season (GCGS) comprised from 72.0 to 95.2 per cent of cover around nests. The height of nesting cover varied from 3.7 to 9.0 inches with a mean of over 5 inches.

The principal plant species forming a canopy over grouse nests were also the three most abundant plants recorded in 3-Step transects around nests. These species were sand lovegrass, little bluestem, and prairie sandreed.

Most nests were located in excellent or good condition range with 15.5 per cent being located in unused range. Based on degree of use, grouse seemed to be using less desirable cover for nesting on two study areas near Burwell than was used on the Nebraska National Forest.

Most nests were located on north or east slopes of large hills, and most nests were located on slopes estimated at 21 to 30 per cent.

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NESTING BIRDS OF THE CRESCENT LAKE NATIONAL WILDLIFE REFUGE

Roger S. Sharpe and Raphael R. Payne

The Crescent Lake National Wildlife Refuge is located in Garden County near the heart of the Nebraska Sandhill Lakes Region. This country is principally rolling mid-grass prairie, the hills reaching a height of as much as 200 feet above the wet meadows. A good portion of the refuge's 46,000 acres consists of these lush meadows which are pocked by marshes, potholes and small lakes. Natural drainage from the surrounding sandhills and springs in the basins feed these water bodies.

The lakes are quite shallow, reaching a depth of perhaps 15 feet. They are alkaline yet are not so highly basic as to inhibit biological production. Aquatic plants and animal life flourish, supporting good fish populations. Surrounding these lakes are extensive marshes in which grow various species of emergent plants. All of these conditions combine to create ideal nesting habitat for aquatic and water-oriented birds.

The surrounding prairie is rich in grassland birds. The few trees and low brush which occur in isolated draws and occasionally on some lake shores harbor the few arboreal species present.

The observers spent five days (June 7-11, 1965) during the peak of the breeding season on the refuge. During this stay, time was spent surveying the refuge and its abundant birdlife. The greater part of one day was spent with a refuge staff member in a jeep, traveling into areas not accessible by car. Another day was spent in a boat on one of the major refuge lakes, Smith Lake. The remainder of the time was spent driving through the refuge and in its vicinity observing birds. Refuge manager, John Wilbrecht, deserves thanks for providing the boat and other transportation through the refuge.

Smith Lake was rather extensively surveyed. Relative number of breeding pairs of various species was estimated from number of nests located and nest contents were noted where possible.

The following is the result of the Smith Lake survey:

Double-crested Cormorant (*Phalacrocorax auritus*) This species was found nesting on the nesting platforms erected primarily for Canada geese. Four platforms were occupied by an estimated 35 breeding pairs. Two platforms supported a total of 17 active nests (nine and eight, respectively). The nests contained an average of 2.6 eggs (1 and 4, extremes). One young was just emerging from the egg. No other eggs were seen to be pipped.

Eared Grebe (*Podiceps caspicus*) This species nested in colonies containing 20 to 100 nests. The nests consisted of mats of floating vegetation on which the eggs were laid. We observed the incubating adult covering the eggs with vegetation as we approached. The 17 nests examined contained an average of 2.8 eggs (1 and 4, extremes). No young were observed. An estimated 400 breeding pairs of Eared Grebes resided on Smith Lake, nesting in approximately eight colonies.

Black-crowned Night Heron (*Nycticorax Nycticorax*) This was the only heron species observed in the area. It was abundant on the larger water bodies and upon close observation could be seen stalking among the reeds of any lake. Smith Lake appeared to contain the major nesting colonies. It was difficult to determine whether these were just small colonies or one large one, as they seemed to nest in almost every large cane (*Phragmites*) stand. It was estimated that at least 150 pairs were nesting on Smith Lake. The nests were well-built of pieces of cane and other aquatic reeds, being built from the water level up to a height of about a foot. Of the 19 nests examined, 13 had eggs only, averaging 3.3 eggs per nest. The other six ranged from one egg and one young to a total of three young. One nest contained two eggs and three young. The young varied in age from newly emerged to as much as an estimated twelve to fifteen days old.

American Coot (*Fulica americana*) Two nests of this species were found. Both were well-constructed of reeds in clumps of *Phragmites.* They were constructed to a height of about a foot above water level. One nest contained nine eggs and the other seven. No estimate was made regarding the number nesting on the lake. These birds were quite secretive, stealing off into the vegetation as one approached.

Forster's Tern (*Sterna forsteri*) Several hundred Forster's Terns were present on Smith Lake. Although many exhibited territorial behavior as we moved through the reeds, only one nest, containing three eggs, was found. This was located on what appeared to be an abandoned muskrat lodge.

Black Tern (*Chlidonias niger*) This species was equally as abundant as Forster's Tern on Smith Lake. The only nest examined contained two eggs. Both tern species were commonly seen feeding on all the refuge lakes. However, the Black Tern appeared to be present in somewhat larger numbers throughout the refuge.

Franklin's Gull (*Larus pipixean*) Approximately thirty pairs were nesting on Smith Lake. The birds appeared to nest in a loose colony among the less dense emergent vegetation. The two nests found, each containing two eggs, consisted of shallow depressions in piles of vegetative debris.

Other birds found nesting on or in the vicinity of the refuge, but not on Smith Lake:

Canada Goose (*Branta canadensis*) Several broods were seen on the larger refuge lakes. Nest platforms have been constructed on these lakes specifically for these geese. A resident flock has been maintained on the refuge for a number of years, the offspring being left unpinioned. The flock has increased in number, and many of the birds resulting from the original stock return each year to nest. These geese are of uncertain lineage, appearing somewhat smaller than *B. c. maxima,* the probable subspecies that nested in the sandhill lakes region originally.

Canvasback (*Aythya valisineria*) A single nest of this species was found on a small island in a pothole near the western edge of the refuge. It contained eleven eggs. Very few Canvasbacks were seen on the refuge.

Golden Eagle (*Aquila chrysaetos*) A destroyed nest containing the partial remains of one young was found nine miles south and one mile east of refuge headquarters on Blue Creek. The nest was approximately forty feet above the ground in a cottonwood tree. The nest was apparently destroyed by wind. The remains of the young now constitutes a specimen (ZM10877) in the zoology collections of the Nebraska State Museum, Lincoln.

American Avocet (*Recurvirostra americana*) Although avocets were found on almost every small pond throughout the refuge, only two nests were found. Each contained two eggs. Undoubtedly many other nests were overlooked, since nearly all of the avocets encountered exhibited territorial aggression as one walked in their vicinity.

Killdeer (*Charadrius vociferus*) This shorebird was very common in the moist meadows and around the small potholes throughout the refuge. The single nest, found at the edge of the main refuge access road, contained four eggs.

Great-horned Owl (*Bubo virginianus*) Two half-grown young were found near the nest in a grove of cottonwoods near the western edge of the refuge. These were the only owls seen on the refuge.

Long-billed Marsh Wren (*Telmatodytes palustris*) This wren was quite common in marshy cane and cattail stands, especially those found near the edge of larger bodies of water. Although difficult to see, singing males could be heard in nearly all of the larger stands. The single "oven-like" nest examined contained four eggs. This nest was located in reeds near Smith Lake.

Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*) Both the Yellow-headed and Red-winged Blackbirds were common around the marshes and lakes. The Yellow-headed appeared to be more common than the Red-wing. As is generally the rule, the Yellow-headed was found nesting in emergent vegetation over water. The one nest checked contained three eggs.

Other birds seen and presumed breeding, but of which no nests were found:

Western Grebe (*Aechmophorus occidentalis*) About forty adults were observed at most times on Smith Lake. One individual, found by scanning the lake with binoculars from a nearby hill, appeared to be incubating on a pile of debris. This nest was not located while surveying the lake by boat. Refuge Manager Wilbrecht indicated that Smith Lake was one of the main breeding areas for this bird on the refuge and that broods have been successfully reared on this lake in past years. Individuals were also seen on other major refuge lakes.

Pied-billed Grebe (*Podilymbus podiceps)* Several were seen on the marshy edges of the larger lakes. It could not be considered common.

Common Mallard (*Anas platyrhynchos*) The mallard was common on most potholes. Although no broods were seen during the survey, refuge personnel had seen them.

Gadwall (*Anas strepera*) Every large pothole contained a pair.

American Pintail (*Anas acuta*) Pintails were occasionally seen. Several downy young were taken in a duck trap earlier in the season (May) by refuge personnel.

Blue-winged Teal (*Anas discors*) This was one of the most common duck species on the refuge. Refuge personnel had found several clutches during this season. No broods had yet been sighted this season, however.

Shoveller (*Spatula clypeata*) The Shoveller was nearly as abundant as the Blue-wing.

Redhead (*Aythya americana*) Several pairs of Redheads were seen on nearly every large body of water.

Ruddy Duck (*Oxyura jamaicensis*) Ruddy Ducks were present in relatively large numbers on most large bodies of water. Males appeared in peak breeding condition.

Hooded Merganser (*Lophodytes cucullatus*) A single female of this species was flushed on Blue Creek approximately nine miles south and one mile east of refuge headquarters. This species may breed in suitable areas where trees with nesting cavities are present. The area where this bird was seen contained several large cottonwoods on the creek banks.

Swainson's Hawk (*Buteo swainsoni*) This hawk was fairly common and was the only buteo seen in the area.

Sharp-tailed Grouse (*Pediocetes phasianellus*) Several were flushed in meadows. This species far outnumbers the Prairie Chicken in this area. Occasionally a male Prairie Chicken is seen on Sharptail dancing grounds in the spring. Several hybrids between these species have been recorded in the area (Wilbrecht, pers. comm.).

Long-billed Curlew (*Numenius americanus*) This magnificant shorebird was found in nearly every meadow. Many adults exhibited territorial behavior indicating probable nesting, while others were observed feeding in small groups. As many as thirteen were seen in one group.

Upland Plover (*Bartramia longicauda*) This sandpiper was quite common in all of the meadows of the area. Its characteristic call could be heard nearly everywhere. A nest of this species was found this season by refuge personnel.

Willet (*Catophtrophorus semipalmatus*) Although not as common as the curlew, territorial adult Willets were occasionally encountered. No nests were found, but the behavior of the adults suggested that breeding territories were established.

Ring-billed Gull (*Larus delawarensis*) This species is not listed in the Revised Checklist of Nebraska Birds (Rapp, et al, 1958) as a breeder in Nebraska. However, small numbers were encountered on all of the larger lakes. While surveying Smith Lake, several exhibited territorial behavior, but no nests were found.

Mourning Dove (*Zenaidura macroura*) Mourning Doves were common and undoubtedly nest on the ground in the absence of trees and shrubs.

Eastern Kingbird (*Tyrannus tyrannus*) This bird was common around refuge headquarters where the many trees and shrubs offered suitable nesting habitat.

Western Kingbird (*Tyrannus verticalis*) Common in the vicinity of refuge headquarters.

Horned Lark (*Erimophila alpestris*) This bird was probably the most abundant passerine in this area. Individuals were constantly flushed as one drove through the refuge.

Barn Swallow (*Hirundo rustica*) A number were seen around the buildings of refuge headquarters.

Yellowthroat (*Geothlypis trichas*) The Yellowthroat was the only parulid seen in the refuge vicinity and was occasionally encountered in the tall reeds and grass in and around potholes.

Bobolink (*Dolichonyx oryzivorous*) Bobolinks were locally common in some meadows. The males were exhibiting territorial singing, suggesting breeding populations.

Eastern Meadowlark (*Sturnella magna*)

Western Meadowlark (*Sturnella neglecta*) Both meadowlark species were present in the area. No determinations were made of the relative numbers of each species.

Lark Bunting (*Calamospiza melanocorys*) This fringillid was very common especially in the uplands. Individuals were seen carrying nesting material.

Grasshopper Sparrow (*Ammodramus savannarum*) Several singing males were observed.

Lark Sparrow (*Chondestes grammacus*) This sparrow was abundant throughout the sandhill grassland.

Crescent Lake refuge is a wonderful birding area, but is of difficult access. From the north the refuge may be reached by a single-lane blacktop road from Lakeside on Highway 2. The trip is about 25 miles and takes an hour or better because of road-surface conditions.

From the south the refuge may be reached by a county gravel (sand) road from Oshkosh. This trip is also about 25 miles. At present this road should not be taken during or following heavy rain. Refuge personnel do not attempt to travel this under adverse conditions even with four-wheel drive vehicles except in emergencies.

Presently no campsites or overnight accomodations are available at the refuge. Picnic facilities do exist on several of the larger lakes, however. No motels or hotels are available at Lakeside or Ellsworth near the northern approach, but such accomodations are available at Oshkosh.

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1965 CHRISTMAS COUNT

Eighty six species were included on the various Christmas counts in this report, and five additional species were seen during the count period but not on the count day. (These are indicated by "p" on the tabulation.) This high figure can be attributed to two factors: the unusually open winter, and the increase in the number of areas reported. Not all of the counts were made in strict accordance with the national rules for the counts. Several years ago the members decided that strict observance of those rules would not be required of reports published in the *Review*.

Two more species would be added to the count if Flickers and Meadowlarks were split. Scottsbluff, Sutherland, Kearney, and Omaha-Plattsmouth reported both Yellow-shafted and Red-shafted Flickers; North Platte, Maxwell, and Stapleton reported only "Flickers"; and Hastings, Lincoln, Wymore, and Peru reported only Yellow-shafted Flickers. Omaha-Plattsmouth reported both Eastern and Western Meadowlarks; Lincoln and Wymore reported only "Meadowlarks"; and Scottsbluff, Sutherland, Maxwell, Stapleton, Kearney, Greeley, and Hastings reported only Western Meadowlarks.

The columns are arranged in an approximate west (left) to east (right) order, and for localities of about the same longitude the northernmost is given first. The available details on the different reports are:

Greeley, January 1, Scott Moody. The observations were on the Moody farm, five miles west of Greeley.

Hastings, December 29. All points within a 15-mile diameter circle with its center two miles south of Hastings at Frisch's pond, to include Crystal Lake area, woodlands along Little Blue River, adjoining fields, city parks, Parkview Cemetery, Lake Hastings. Weather: clear in the morning, cloudy in the afternoon, temperature 35-48 degrees, wind 5-15 mph, no snow, ponds frozen. Fifteen observers in five parties: Mrs. R. R. Damerell, W. E. Eigsti, Charles Hansen, Mrs. Ray Horrigan, Mrs. Geo. Janko, Mrs. A. M. Jones, Mrs. C. E. Kennedy, Mrs. H. L. Marsh, Mrs. Marie Marsh, Mrs. Willard Palmer, Mr. and Mrs. Eldon Percival, Mrs. O. W. Ritchey, Miss Bernice Welch, and Miss Vera Maunder, who also compiled the report for the Brooking Bird Club.

Kearney, January 1. All points within a 15-mile diameter circle, center at the Platte River bridge, to include Harmon Park, Cemetery, Cotton Mill Lake, Robinson's Woods, Fort Kearney State Park, and Sand Pits. Deciduous woods 40%, open fields and pastures 30%, roadside ditches 20%, town 10%. 7:45 AM to 5:30 PM. Cloudy sky, temperature 24-34 degrees, wind calm, river open, lakes frozen. Six observers in one party. Party hours 8, total miles 82. George W. Brown (compiler), Laurie Brown, Marian G. Brown, Randy Brown, Ronny Marrow, Norma Radford.

Lincoln, December 26. Fifteen-mile diameter circle centered at 14th and A Streets, to include Pioneers Park, Wyuka Cemetery, area east of Holmes' Park, Dale Weiss farm on Stevens Creek, and the North 27th Street flats. Heavy overcast, wind SE-NW 5-15 mph, temperature 25-31 degrees, light skiff of snow on the ground, creeks open, ponds partly frozen. Eleven observers: Oscar Alexis, Jim Commers, Mr. and Mrs. George Keim, Dr. Rosalind Morris, A. E. Morris, Doris Gates, Ann Laing, Shirley Pogge, Mary Alice Vernon, and Ralph Harrington who compiled the report.

Maxwell, January 1. North Platte to Maxwell, west end of Brady Island, Moran and Box Elder Canyons. 9 AM to 5 PM, weather foggy to clear, 28-43 degrees, calm. About 70 miles in car, 1 on foot. Gail Shickley and

text continued on page 38

	Sctsblf	Tryon	Suth	N.P	Max	Stp.	Kearn	Grly	Hast	Linc	Wym	Om-Pl	Peru
Great Blue Heron	1	-	-	-	8	-	-	-	-	-	-	-	-
Canada Goose	40	-	x	-	-	-	-	-	-	-	-	115	-
Snow Goose	-	-	-	-	-	-	-	-	-	-	-	42	-
Blue Goose	-	-	-	-	-	-	-	-	-	-	-	43	-
Mallard	30,400	-	x	-	3026	200	400	-	17	2000	-	30	-
Gadwall	-	-	-	-	-	-	-	-	p	-	-	-	-
Green-winged Teal	-	-	-	-	-	-	15	-	-	3	-	2	-
Blue-winged Teal	-	-	-	-	-	-	-	-	6	-	-	-	-
Shoveler	-	-	-	-	-	-	-	-	40	-	-	-	-
Redhead	-	-	-	-	-	-	5	-	p	-	-	-	-
Ring-necked Duck	-	-	-	-	-	-	-	-	2	-	-	-	-
Canvasback	-	-	-	-	-	-	-	-	6	-	-	-	-
Lesser Scaup	-	-	-	-	-	-	-	-	p	-	-	-	-
Common Goldeneye	1	-	x	-	3	-	-	-	p	-	-	1	-
Bufflehead	-	-	-	-	-	-	-	-	p	-	-	-	-
Ruddy Duck	-	-	-	-	-	-	-	-	p	-	-	-	-
Common Merganser	2	-	x	-	-	-	-	-	-	-	-	-	-
Red-tailed Hawk	-	-	-	-	4	-	-	-	-	6	6	12	1
Red-shouldered Hawk	-	-	-	-	-	-	-	-	-	-	-	1	-
Rough-legged Hawk	2	-	x	-	-	1	1	-	1	1	-	-	-
Golden Eagle	2	-	-	-	-	1	-	1	-	-	-	-	-
Bald Eagle	2	-	x	1	6	-	3	-	-	-	-	1	-
Marsh Hawk	3	-	x	-	3	2	2	-	6	3	1	4	-
Prairie Falcon	-	-	x	-	-	-	-	-	-	-	-	-	-
Peregrine Falcon	-	-	-	-	1	-	-	-	-	-	1	-	-
Pigeon Hawk	-	-	-	1	1	-	-	-	-	-	-	-	-
Sparrow Hawk	3	-	x	-	4	1	8	-	2	3	2	13	-
Sharp-tailed Grouse	-	6	-	-	-	-	-	-	-	-	-	-	-
Bobwhite	p	-	-	-	-	-	-	-	1	-	-	6	-
Ring-necked Pheasant	6	3	-	13	3	6	2	2	1	1	2	-	-
Killdeer	-	-	-	-	-	-	-	-	1	-	-	-	-
Herring Gull	-	-	x	1	-	-	-	-	-	-	-	-	-
Ring-billed Gull	-	-	x	2	3	-	2	-	-	-	-	6	-
Rock Dove	-	-	-	-	-	-	-	-	-	-	27	108	-
Mourning Dove	10	-	-	-	-	-	-	-	42	108	4	6	-
Screech Owl	p	-	-	-	-	-	-	-	-	-	-	-	-
Great Horned Owl	2	1	-	-	1	-	-	-	3	1	3	1	1
Long-eared Owl	-	-	-	-	-	1	-	-	-	-	-	-	-
Belted Kingfisher	2	-	x	1	-	-	7	-	2	-	-	2	1

	Sctsblf	Tryon	Suth	N.P	Max	Stp.	Kearn	Grly	Hast	Linc	Wym	Om-Pl	Peru
Flicker	23	-	x	1	5	2	13	p	9	2	2	45	3
Red-bellied Woodpecker	-	-	-	-	1	-	-	-	3	1	10	45	1
Red-headed Woodpecker	-	-	-	-	-	-	-	-	-	-	-	3	-
Yellow-bellied Sapsucker	-	-	-	-	-	-	-	-	p	-	1	-	1
Hairy Woodpecker	2	-	x	1	-	-	1	1	3	1	6	22	1
Downy Woodpecker	12	-	x	3	1	1	3	-	11	6	6	70	3
Horned Lark	50	400	x	-	15	16	185	10	100	-	20	7	-
Blue Jay	9	-	-	-	-	1	9	-	11	22	10	19	7
Black-billed Magpie	40	-	x	1	34	6	1	1	15	-	-	-	-
Common Crow	3	-	x	5	10	14	10	90	20	65	13	50	200
Black-capped Chickadee	23	-	x	15	7	2	17	p	100	32	14	158	17
Tufted Titmouse	-	-	-	-	-	-	-	-	-	2	3	16	1
White-breasted Nuthatch	2	-	-	1	-	2	1	-	10	10	4	35	6
Red-breasted Nuthatch	3	-	-	3	-	-	-	-	6	8	-	1	-
Brown Creeper	p	-	-	1	-	-	1	1	3	4	1	3	-
Carolina Wren	-	-	-	-	-	-	-	-	-	-	-	-	1
Mockingbird	1	-	-	-	1	-	-	-	-	1	-	-	-
Brown Thrasher	-	-	-	-	-	-	-	-	-	1	-	1	-
Robin	14	-	x	16	30	28	4	-	50	-	1	1	1
Eastern Bluebird	-	-	-	-	-	-	-	-	-	-	1	23	-
Townsend's Solitaire	10	-	-	1	1	1	-	-	-	-	-	-	-
Golden-crowned Kinglet	1	-	-	14	-	-	2	-	p	7	-	1	-
Cedar Waxwing	p	-	-	-	-	-	-	-	3	42	-	-	-
Northern Shrike	2	-	-	-	-	-	-	-	-	-	-	-	-
Loggerhead Shrike	-	-	-	-	1	-	-	-	-	1	2	-	-
Starling	2227	20	x	7	36	17	497	100	500	179	182	589	15
Myrtle Warbler	-	-	-	2	-	-	-	-	-	-	-	-	-
House Sparrow	1297	100	x	27	155	3	131	60	500	1000	310	5230	125
Meadowlark (sp)	31	-	x	-	6	9	47	1	150	32	107	111	-
Redwinged Blackbird	5062	300	x	-	694	22	1	-	75	-	375	15	-
Rusty Blackbird	-	-	-	-	-	-	-	-	25	-	-	86	-
Brewer's Blackbird	-	-	-	-	1	-	-	-	-	-	-	-	-
Common Grackle	-	-	-	-	-	-	-	-	25	-	506	5	-
Brown-headed Cowbird	-	-	-	-	-	-	-	-	30	-	-	9	-
Cardinal	-	-	x	2	3	-	9	-	20	32	20	94	21
Evening Grosbeak	p	-	-	-	2	-	-	-	-	-	-	-	-
Purple Finch	-	-	-	-	-	-	-	-	19	9	-	-	-
House Finch	44	-	-	-	-	-	-	-	-	-	-	-	-
Common Redpoll	-	200	x	-	-	-	-	-	-	-	-	-	-
Pine Siskin	109	p	x	-	7	-	17	-	50	18	-	-	-

	Sctsblf	Tryon	Suth	N.P	Max	Stp.	Kearn	Grly	Hast	Linc	Wym	Om-Pl	Peru
American Goldfinch	49	100	x	3	45	-	12	-	60	8	12	33	27
Red Crossbill	-	-	x	-	-	-	-	-	-	-	-	-	-
Rufous-sided Towhee	-	-	-	-	-	-	-	-	p	3	-	-	-
Junco (sp)	-	-	-	-	50	-	-	-	-	-	-	-	-
Slate-colored Junco	21	-	x	6	30	3	83	4	25	126	44	152	50
Oregon Junco	30	30	-	-	9	4	8	-	1	-	-	5	-
Tree Sparrow	22	200	x	3	168	108	22	1	30	12	39	393	6
Harris' Sparrow	3	-	x	-	50	-	14	-	60	145	68	35	14
White-crowned Sparrow	13	-	-	-	-	-	12	-	6	-	1	5	-
White-throated Sparrow	-	-	-	-	-	-	-	-	-	1	-	-	-
Lincoln's Sparrow	-	-	-	-	-	-	-	-	-	-	-	1	-
Song Sparrow	1	-	-	1	-	-	12	-	p	5	4	4	-
Lapland Longspur	-	-	-	-	-	17	-	-	p	-	-	-	-
Total Individuals	39580	1360	-	132	4425	468	1557	272	2050	3901	1808	7660	503
Total Species	42	11	32	26	36	25	35	12	44	38	35	50	22
Species present not seen	5	1	-	-	-	-	-	2	11	-	-	-	-

Edith McIntosh. There was probably another Peregrine Falcon, but the bird flew too soon to be identified. This area and those reported under North Platte and under Sutherland are adjacent but not overlapping.

North Platte, December 31. Cody and Bill Wood Parks and adjoining river. 9 AM to 11:30 AM, partly cloudy, 30-35 degrees, calm. Gail Shickley.

Omaha-Plattsmouth, January 2. 15-mile diameter circle centered on Offutt Lake (about three miles north of the junction of the Platte and Missouri Rivers), including the Plattsmouth Waterfowl Management Area, Fontenelle Forest, and, in Iowa, Lake Manawa State Park. Treva Burd, Mrs. Paul Heineman, Mrs. Jean Schneider, and Mrs. Don Wood, Plattsmouth; Carl Swanson, Bellevue; John Plank, Council Bluffs, Iowa; Grover C. Bramel, Rev. Alban Dachauer, Marian Dennison, Michael Hansen, Glenn H. LeDioyt, Violette E. Madsen, James Malkowski, Donald Nelson, Mrs. Joseph Pluta, Dr. Leon Powell, David Skryja, E. Thomas Stacey, Roger Sylvester, and Doris S. Wallace, Omaha.

Peru, January 1. 8 AM-4 PM. Misty, dark, and foggy all day, difficult to see colors forty feet away. Ida May Heywood (reporter) and Mary Alice Vernon, Peru; Mrs. Loy Mowery, Auburn; and Mrs. Jessamine McMullin, Stella.

Scottsbluff, December 30. Fifteen mile diameter circle centered on the Gering-Scottsbluff bridge. Cloudy, 36 to 56 degrees, wind in the morning 5 to 10 mph, in the afternoon up to 30 to 40 mph. Mrs. J. W. Brashear, Mrs. Alvin Vance, Mr. and Mrs. Roy Witschy, Mr. and Mrs. S. R. Young, Lydia Bolz, and Mrs. Harry Banghart. Reported by Mrs. Witschy. Jim McCole counted the Mallards by plane.

Stapleton, January 1. 9 AM to noon, 1 PM to 4:30 PM. Temperature 26 to 40 degrees. Forenoon cloudy with fog; afternoon partly cloudy. Nearly calm throughout the day. Covered South Loup Valley, sandhills, upland. Habitats: wooded, swampy, pasture grass land and fields. Earl Glandon.

Sutherland, December 29. Forebay to Lake Maloney and along the canal to Sutherland. 9 AM to 5:30 PM. Nineteen degrees, wind North, 5mph. Catherine Viehmeyer and Gail Shickley. Species seen were checked but not counted.

Tryon, December 29. Seen at the feeder, bird bath, and on her daily walk by Mrs. Oona Bassett on her ranch in northwestern McPherson County.

Wymore, December 29. Temperature 35 to 40 degrees, wind about 25 mph, cloudy. Mrs. Lynn Harden, Miss Verneil Griffin, Paul Marshall, and Mrs. Floyd Patton, reporter. The Peregrine Falcon was identified by Mr. Viehmeyer from the detailed description sent to him.

EXCERPTS FROM LETTERS

During October the water in Lake Maloney was lowered several feet to permit repairs of various sorts to be made. This left a wide expanse of smooth, sandy lake bottom around the lake, a pleasant area for walking.

On October 20 there seemed to be little in evidence other than gulls, scattered all over the lake. Since the great majority of them were Ring-bills, with a few Herrings, there seemed to be no reason to examine them with my binocular. My attention was attracted to one group on the shore which was permitting me to come close to them, and it finally became a challenge to see how close I could walk before the birds flew away. When part of the flock did fly I raised my binocular to watch as they flew away and was startled to note that one of them had a prominent black spot back of the eye and that the rear edge of the wing appeared to be dark. This was about all I could note as the bird flew directly away from me. I was not carrying my field guide and doubted I could identify the bird from what I had seen. Luck was with me, for when I scanned the birds still standing on the shore another gull with the black dot on the head stood among the Ring-bills. I examined it at length, noting the dark eye, black bill, and red legs. The bird was noticeably smaller than the Ring-bills standing beside it. Eventually I startled the birds into flight and noted again the dark rear edge of the wings, and also a narrow tail band. With these features in mind, I was able to identify the birds as Bonaparte's Gulls. In looking back over the Migration reports I find there are only a few records of Bonaparte's Gulls in Nebraska, and most of these are from Adams County east. The two exceptions are one report from Keya Paha County (*NBR*, 23:70) and one report from Garden County (*NBR*, 32:15). All of the previous reports of Bonaparte's Gulls in the state were of observations made during spring migration. No observations during the fall migration were reported in any of the literature I had available.

On October 23 I was walking on the beach with Ella Nielsen, attempting to get closer to a flock of ducks resting on the water. As we neared the water's edge we became aware of small water birds scattered over the water. Western Grebes were easy to identify, but the smaller ones were in eclipse plumage and we could not be sure of their identity beyond the fact of their being grebes. Their silhouettes and behavior determined that. These birds dotted the water as far as we could see them, some alone, many of them in small flocks. Their constant diving and bobbing up and down on the water made it difficult to estimate their numbers, but it is safe to say there were hundreds of them, and I think it no exaggeration to say there were in the neighborhood of 1,000 grebes on the lake that day. On October 25 I returned to the same area with Edith McIntosh, taking my Zoomscope. We found many grebes still remaining in the area, although less than half as many as had been there two days before. With the Zoomscope it was easy to identify Western, Horned, and Eared Grebes (the last two species in eclipse plumage), divided about evenly in numbers, and a very few Pied-billed Grebes, at least part of them juvenals. This is the only time I have ever observed all of the grebes together in such immense numbers.

Also on October 25 we found our attention attracted by one gull standing with a small group at the water's edge. There were several Ring-bills in the flock, and a few Herring Gulls, but the bird that drew our attention seemed to be somewhat between the two in size. It was about 150 feet away, so we set up the Zoomscope to observe it more closely. The Zoomscope ranges from 15x to 60x and gave us a good observation of the bird at that distance. We could see no dot on the rather bright yellow bill, but were agreed on green legs and a dark eye, which would indicate a California Gull. There is no authenticated record of the California Gull in Nebraska, but I report it here in the hopes that others will be on the lookout for it, too. Peterson gives the breeding range of the California Gull as extending as far east as North Dakota so it seems entirely possible that it could migrate through Nebraska occasionally, but at a casual glance an observer would certainly think it was a Herring Gull.

—Gail Shickley, North Platte

I made yet another delightful bird observation for 1965 when I caught sight of a female White-winged Scoter at the nearest farm pond on my beat, about a quarter mile from home. I make it a practice to approach carefully, in case there be ducks. I peeked over the dam on October 11, and apparently none were present. Without caution, I then quickly progressed into view, and to my surprise, a cootlike duck dove into the water at the edge of the pond. Even with only that brief glance I was aware that it could not be the common Coot. Shortly a strange sound greeted my ears and I thought that perhaps the frogs jumping into the water ahead of me were the source, although it hardly sounded natural.

While I was trying to locate the raspy-toned croak definitely I had a second surprise in glancing out across the pond. There, to the farther side, was my "coot-duck", swimming buoyantly across the water's surface and giving me a good view of its white wing-patch which, according to the books, sometimes cannot be seen until the bird raises its wings. This one soon flew, pattering along a few yards on the water in doing so, and then more white was visible in the wing, as Peterson's guide describes. It also states that the whitish face patches are often obscure, and are more prominent in young birds. I did not notice the patches, and concluded that it was an adult female, as the light seemed favorable enough.

The books that I have do not mention any call notes for the Scoters, and it is my belief that, in this case, it was frightened at my sudden appearance and the fright caused it to give this buzzy rattle-like sound.

So—another new species is added to my life list.

—Harold Turner, Holstein

In January I got a female pheasant, taken near Columbus, which is of special interest because of marked male characteristics. The neck is colored like that of a male, and the tail is 17.5 inches long, colored like that of a hen but with markings like those of a male. The ovaries seemed normal except for some seemingly fatty tissue which was brownish in color. I have another hen pheasant which I mounted years ago with a normal tail but the plumage of the belly closely resembles that of a male. I know this aberration occurs, but I do not know how common it may be in our area. I have never seen a male pheasant with even a trace of the coloring of a hen pheasant.

Ralph Velich, Omaha

The day after I returned from Thanksgiving vacation (November 29) I discovered a number of dead Cedar Waxwings in the school patio where they apparently had struck glass panels when attempting to fly through the area where there is glass on each side of the hall, giving a "through-way appearance". During the day additional birds were located dead, dying, or at least dazed, so that at the end of the day I had picked up ten birds and released one which apparently was only temporarily dazed. The following day an additional three Cedar Waxwings were picked up.

These birds had been eating the apples from a crab-apple tree located on the east side of the patio, and they apparently would fly from the tree and hit the glass. Though I am not certain of this, I believe they may have been "under the influence of one-too-many apples", because the apples were rotting and souring on the tree.

Probably the most important find, however, was a single Bohemian Waxwing which I found stunned during the noon hour of November 29. This bird was taken to the biology room where he received his share of attention until after school that afternoon, when he was released. Like the Cedar Waxwing which was released, the Bohemian Waxwing flew to a low branch of a maple and remained there as long as I was watching him.

Earlier in the fall a couple of Robins were noted near the glass where they apparently suffered a similar fate. Most birds with all their faculties (not under the influence) seem to realize the situation in time to fly over the roof.

C. W. Huntley, Crete

Glenn LeDioyt photographed an unusual bird in the yard of Mrs. Joseph Pluta on January 9. The picture was shown at the next meeting of the Omaha Bird Club and it was agreed that it was a Western Tanager.

NESTING REPORT, 1965

This report covers specific instances of nesting, or indications of attempts at nesting, observed in Nebraska in 1965. Sixty-one species are listed. The following symbols are used:

B	building a nest, or bird at or on a nest for which there is no mention of eggs or young being seen.
C	common nester - used only if no other information is available.
F	feeding young away from the nest.
G	gathering or carrying food.
M	gathering or carrying nesting material.
N	nest in which eggs or young were seen, including parasitical eggs found. This symbol is used in preference to any other.
X	reported only as "nested" with no further details.
Y	young observed, away from nest, and no feeding mentioned.

Where dates were mentioned in the reports they have been used, with the following abbreviations for months. Mr, Ap, My, Je, Jy, Au, S, O.

The columns are arranged in approximate west (left) to east (right) order. The participants and special comments are:

Adams, Central. Miss Vera Maunder for Brooking Bird Club. Miss Maunder and Mrs. Ritchey found a number of Mourning Dove nests in Parkview Cemetery in Hastings, but apparently no young were successfully raised there. They attribute the failure to the many Grackles in the area.

The Eldon Percivals, from Sutton, Clark County, had many Lark Bunting nests in their milo stubble. Mr. Percival tried to avoid the nests when he worked the field, and was at least partially successful.

Adams, South. Harold Turner, Holstein.

Dawes. Doris Gates, Chadron, Mrs. W. A. Neeland, Hemingford, and Mrs. Roy J. Witschy. Mrs. Neeland saw few Nighthawks during the summer, but they were numerous on August 24 and she believes the increase was due to young ones which had left the nest.

Douglas-Sarpy. Mrs. S. A. Perkins, Dr. Leon Powell, Carl Swanson, R. G. Cortelyou.

Lincoln, Mrs. Bernadine Cox, Hershey.

Scotts Bluff, Mrs. Roy J. Witschy, Scottsbluff. On June 15 Mrs. Witschy saw a Swainson's Thrush building a nest at Sylvan Lake, South Dakota, which is not too far north of the Nebraska Line.

	Dawes	Scotts Bluff	Lincoln	Adams South	Adams Central	Douglas-Sarpy
Great Blue Heron	--	--	--	--	B	--
Mallard	--	--	Y Au	X	--	--
Blue-winged Teal	--	--	--	--	Y Au 31	--
Wood Duck	--	--	--	--	--	Y Jy
Sharp-tailed Grouse	Y Jy,O	--	--	--	--	--
Bobwhite	--	--	X	X	Y Mr	--
Ring-necked Pheasant	--	--	Y Au	X	--	--
Killdeer	--	--	--	X	--	--
Long-billed Curlew	--	Y My 30	--	--	--	--
Upland Plover	Y Jy 5	--	--	Y Jy	--	--
Mourning Dove	--	N Jy, Au	G M	--	N My Je	G Ap My
Black-billed Cuckoo	--	--	--	N	--	--
Screech Owl	Y Je 17	Y Je 13	--	--	--	--
Great Horned Owl	--	N My 27	--	--	--	--
Chimney Swift	--	--	--	--	N	--
Flicker	--	--	Y Je	X	--	--
Red-headed Woodpecker	--	--	Y Au	--	Y	--
Hairy Woodpecker	N Je 16	--	--	--	--	--
Eastern Kingbird	M G Je	--	Y S 1	X	--	--
Western Kingbird	C Je-Au	N Je 3	--	X	--	--
Great Crested Flycatcher	--	--	--	X	--	--
Eastern Phoebe	--	--	Y Au 10	--	--	--
Say's Phoebe	B Ap-Je	N Au 22	--	--	--	--
Empidonax sp.	--	--	--	--	--	M My 25
Barn Swallow	N My,Jy	N Au 21	N Je Jy	X	--	--
Cliff Swallow	B My	B Je 13	--	--	--	--
Purple Martin	--	--	--	--	X	--
Blue Jay	--	--	--	--	--	M My
Black-billed Magpie	--	N Je 2	--	--	--	--
Black-capped Chickadee	--	B Je 2	--	--	--	--
House Wren	B My N Je	--	Y Jy 5	Y	N	--
Carolina Wren	--	--	--	Y Jy 13	--	--

	Dawes	Scotts Bluff	Lincoln	Adams South	Adams Central	Douglas-Sarpy
Catbird	--	--	--	X	Y	M My Je
Brown Thrasher	C	N My Je	--	X	M F My Je	--
Robin	Y Jy 5	N Je	--	X	Y	N My
Eastern Bluebird	--	--	Y Jy	--	--	--
Mountain Bluebird	X	--	--	--	--	--
Loggerhead Shrike	B G My	--	--	--	--	B Y Ap-Jy
Starling	--	N Je	M G My-Au	--	--	--
Red-eyed Vireo	--	B Je	--	--	--	--
Warbling Vireo	--	N	--	--	--	--
Yellow Warbler	--	N Je-Jy	--	Y Jy	--	B My Je
House Sparrow	--	--	B Mr	X	C	--
Bobolink	--	--	Y Au	--	--	--
Eastern Meadowlark	--	--	Y Jy-Au	--	--	--
Western Meadowlark	Y Jy	--	--	X	--	--
Red-winged Blackbird	--	--	Y Au	X	--	--
Orchard Oriole	--	--	--	X	--	--
Baltimore Oriole	--	--	--	--	--	M B My Je
Bullock's Oriole	B My Je	B Je 2,6	--	--	--	--
Common Grackle	--	--	Y Au	X	Y Je	--
Brown-headed Cowbird	--	N Je, Jy	Y S	N	--	--
Cardinal	--	--	--	X	Y Jy Au	N Je 2
Rose-breasted Grosbeak	--	--	--	--	--	N Je 2
Dickcissel	Y Au 23	--	Y Au	--	--	--
House Finch	--	N Ap-My	--	--	--	--
Lark Bunting	N Je,Y Jy	--	Y Au	X	Note	--
Grasshopper Sparrow	G Jy Au	--	--	X	--	--
Lark Sparrow	--	--	--	X	--	--
White-winged Junco	Y	--	--	--	--	--
Chipping Sparrow	--	--	--	Y Jy	--	--

Nebraska Ornithologists' Union, Inc.
5109 Underwood Avenue
Omaha, Nebraska 68132
Return Requested

WESTERN KINGBIRD NESTING IN THE NEBRASKA SANDHILLS

The nesting success and activities were recorded on 10 western kingbird (*Tyrannus verticalis*) nesting attempts in the trees around the headquarters of the Valentine National Wildlife Refuge during the summer of 1965.

The study area was approximately 10 acres in size and contained woods, native grassland, lawns and various buildings. Most common tree species were black locust (*Robinia pseudoacacia*), willow (*Salix spp.*), cedar (*Juniperus virginiana*), and ponderosa pine (*Pinus ponderosa*), in order of abundance.

Eighty (80.0 percent) of the 10 western kingbird nesting attempts produced young—a total of 33. From three to five young were produced per successful nest with an average of 4.1. Only two nests were unsuccessful. One nest contained three eggs which were deserted. The other unsuccessful nest, which had four young initially, was found empty and partly destroyed. These young birds may have been taken by a longtail weasel (*Mustela frenata*), because one was observed in an adjacent tree a few days later.

All ten nesting attempts were apparently the result of ten different adult pairs, because all were active during the same period. No renesting was observed during the season. It is interesting to note that the young in nine nests hatched within a five day period, from July 2 to July 6, 1965 inclusive. Fledging took place between July 15 and July 20, indicating that the brooding period lasts about two weeks.

Ronald D. Klataske
University of Maine

HOODED WARBLER IN LOGAN COUNTY

On November 10, 1965, a warbler with yellow markings about the head was observed in the shrubbery at the edge of the garden. On the 12th it was again observed with binoculars at close range and it was identified as a Hooded Warbler. Mrs. Glandon saw the bird at the bird bath on the 13th and corroborated Mr. Glandon's identification. It was again seen early in December. This is a new record for Logan County.

About November 5th, Clarence Lanka reported three Swans on Cody Lake, about 14 miles north of Stapleton. One was an adult, two were immature. The adult swan was there for about a month but the immatures were gone soon after the first observation. Species identification was not made but it is believed that they were Whistling Swans. —*Mr. and Mrs. Earl W. Glandon, Stapleton.*

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AN EARLY RECORD OF THE ROSS' GOOSE IN NEBRASKA

James Tate, Jr.

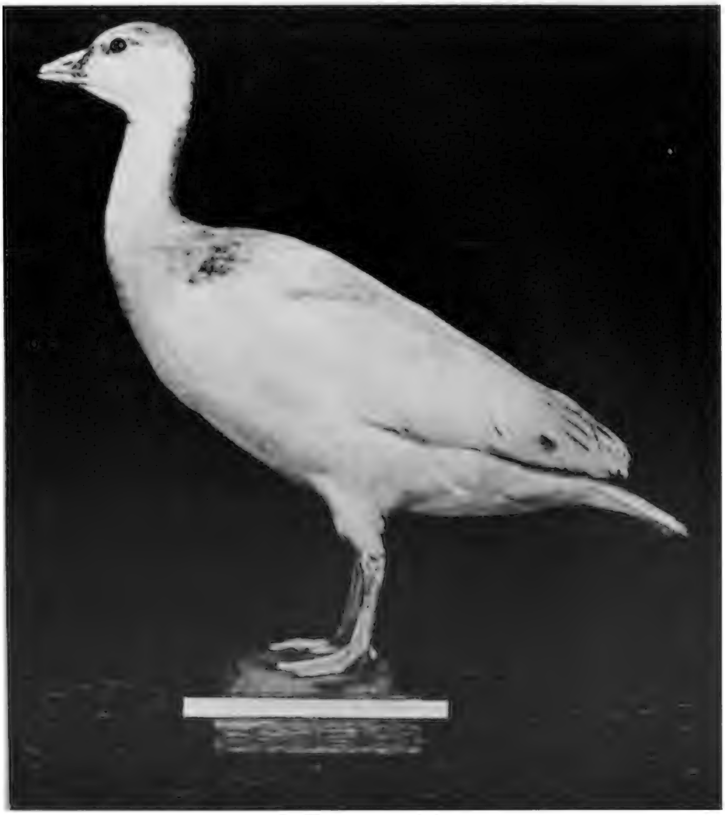

Figure 1. Ross Goose (*Chen rossi*) from the Stipsky Collection. Collected in the fall of 1922 on the Platte River south of Hooper, Nebraska. This is probably the earliest known record for the species in Nebraska. The specimen is now UNSM ZM #11255. The scale on the base is six inches long.

The Ross' Goose (*Chen rossi*), which is a small, mostly white goose, is almost indistinguishable from the Snow Goose (*Chen hyperborea*) unless viewed critically. As recently as 1963 (*Nebraska Bird Review* 31:51), Mrs. John Leushen pointed out that there were no known Nebraska records for the Ross' Goose. The species has been reported from nearby states, and may be extending its wintering range eastward (see Dzubin, *Condor* 67:511-534). In 1964, several Ross' Geese were discovered near Alliance, Nebraska, clearly establishing the bird on the state list (banding records unpublished).

I recently came across an uncatalogued specimen of the Ross' Goose as I was sorting a collection of mounted birds given to the University of Nebraska State Museum by the late J. E. Stipsky of Hooper, Nebraska. This immature bird (Figure 1) probably represents the earliest known Nebraska record for the species. The somewhat scanty data on the base of the mount tells that the bird was mounted on 6 November 1922 by Stipsky, and that the bird was shot on the Platte River. One is left to assume, and I believe rightly so, that the bird was shot that same season (if not that day) somewhere along the Platte south of Hooper. The specimen has been catalogued as UNSM *ZM* #11255.

Since further records of this species might be expected from Nebraska, it might be worthwhile to mention some of its identifying characters. The Ross' Goose is very much like the Lesser Snow Goose (*C. h. **hyperborea***) except that it is smaller, approaching the size of a Mallard Duck (*Anas platyrhynchos*). The length of the Lesser Snow Goose varies from 24 to 31 inches, while the length of Ross' Goose ranges from 21 to 26 inches. The bill of Ross' Goose is reddish, with warty protuberances on the base of the upper mandible. The black grinning patch of the Snow Goose is absent. Usually the Ross' Goose breeds north of the Arctic Circle in north-central Canada, and winters in the Central Valley of California near Sacramento.

Department of Zoology & Physiology
University of Nebraska

THE SIXTY-FIFTH ANNUAL MEETING

The 1966 annual meeting was held May 30 in conjunction with the meeting of the Nebraska Academy of Sciences at the Nebraska Center for Continuing Education, East Campus of the University of Nebraska, Lincoln.

The paper session consisted of:

Recoveries of Blue Jays Banded in Nebraska, Willetta Lueshen, Wisner

Frequency of Parasitism by Brown-headed Cowbird of Redwinged Blackbirds' Nests in Lancaster County, Nebraska, Glen E. Dappen, University of Nebraska

Fossil Birds in the State Museum, James Tate, Jr. (speaker) and Larry D. Martin, University of Nebraska

Prairie Grouse Behavior, Roger Sharp, University of Nebraska

Thermoregulatory Mechanisms of the Turkey Vulture, Daniel E. Hatch, Chadron State College

Biology of the Torrent Duck of South America, Paul A. Johnsgard, University of Nebraska

Ecological Aspects of Nest Building in Redwinged Blackbirds, Larry C. Holcomb, Midland College

Some Impressions and Remarks on Birding in Germany, Alban J. Dachauer, Creighton University.

Dr. Robert M. Mengel, University of Kansas, spoke at the banquet on "Nights with the Goatsuckers of North-eastern Kansas".

At the business meeting the following officers were elected: President, Roger Sharpe, Lincoln; Vice-President, Mrs. Julia Brashear, Scottsbluff; Secretary, Dr. Neva Pruess, Lincoln; Treasurer, George W. Brown, Kearney; Editor, R. G. Cortelyou, Omaha; Custodian, Mrs. Jean Tate, Lincoln. The members voted to allow the second and subsequent members of a family living at the same address to elect not to receive copies of the *Review* and the *Newsletter* and to receive a one-dollar reduction in the cost of whatever class of membership they elect to take.

It was announced that the 1966 Fall Field Day will be held in Plattsmouth late in October, the exact date to be announced later. This will offer a chance to see the waterfowl concentrations on the Game Management Area. The 1967 Annual Meeting will be held in Chadron the second week-end in May.

There was a short field trip Saturday morning (April 30) to the Chet Agee Nature Center in Pioneer Park and for the Annual Field Day Sunday (May 1) there was a choice of an early trip to Emerald Lake and Nine-mile Prairie or a later one to the North 27th Street ponds (in Lancaster County) and Ceresco Flats and Memphis Lake (both in Saunders County). For the Saturday trip and the first part of the Sunday trips untimely near-freezing temperatures and wind made birding difficult. In the following list of species seen the particular trips are indicated by A for the Saturday trip, B for the early Sunday trip, and C for the later Sunday trip (C* for those species not seen in Lancaster County). Eared Grebe B, Pied-billed Grebe BC, Double-crested Cormorant B, Black-crowned Night Heron AC, American Bittern C*, Snow Goose BC*, Blue Goose C*, Mallard ABC, Gadwall ABC*, Pintail B, Green-winged Teal AC, Blue-winged Teal ABC, American Widgeon BC*, Shoveller ABC, Redhead A, Ring-necked Duck B, Lesser Scaup ABC* Bufflehead B, Ruddy Duck B, Red-tailed Hawk C, Marsh Hawk ABC, Sparrow Hawk BC, Bobwhite BC, Ring-necked Pheasant ABC, Virginia Rail C*, Sora ABC, American Coot ABC, Semipalmated Plover C*, Killdeer ABC, Common Snipe ABC*, Spotted Sandpiper C*, Willet BC*, Greater Yellowlegs AC, Lesser Yellowlegs ABC, Pectoral Sandpiper ABC, Baird's Sandpiper C, Dowitcher sp. C, Semipalmated Sandpiper C, Wilson's Phalarope C*.

Ring-billed Gull BC, Franklin's Gull ABC, Forster's Tern B, Rock Dove AC, Mourning Dove ABC, Great Horned Owl A, Chimney Swift BC, Belted Kingfisher B, Flicker ABC, Red-bellied Woodpecker AB, Red-headed Woodpecker BC, Downy Woodpecker BC, Eastern Kingbird BC, Eastern Phoebe B, Horned Lark C*, Tree Swallow BC, Bank Swallow C, Rough-winged Swallow ABC, Barn Swallow ABC, Cliff Swallow C, Purple Martin AC, Blue Jay ABC, Common Crow ABC, Black-capped Chickadee BC, Tufted Titmouse B, Red-breasted Nuthatch A, House Wren AB, Long-billed Marsh Wren C*, Brown Thrasher ABC, Robin ABC, Swainson's Thrush A, Ruby-crowned Kinglet A, Loggerhead Shrike C, Starling ABC, Orange-crowned Warbler AB, Myrtle Warbler AB, (Western) Palm Warbler B, Louisiana Waterthrush B, House Sparrow ABC.

Eastern Meadowlark ABC, Western Meadowlark ABC, Yellow-headed Blackbird AC, Redwinged Blackbird ABC, Orchard Oriole C, Common Grackle ABC, Brown-headed Cowbird ABC, Cardinal ABC, Pine Siskin A, American Goldfinch BC, Grasshopper Sparrow B, Le Conte's Sparrow B, Lark Sparrow B, Slate-colored Junco C, Chipping Sparrow A, Harris' Sparrow ABC, White-crowned Sparrow BC, White-throated Sparrow AB, Lincoln's Sparrow B, Swamp Sparrow BC*, Song Sparrow C.

Total species: Saturday trip (A) 49; early Sunday trip (B) 68; late Sunday trip (C) 71; total for Sunday only 92; grand total 99. A flying hawk seen on trip B probably was a Broad-winged Hawk but was not officially identified. Rosalind Morris saw a Say's Phoebe south of the Ceresco Flats area Sunday afternoon.

Notes

Bonaparte's Gull. At Wagon Train Lake, 3 miles east of Hickman, on June 2, 1963, Hazel Scheiber and I saw two birds sitting on a piece of wood rising out of the water. At first we thought they were terns from their size, but then concluded that they were gulls. They had black bills and the black cheek-spot behind the eye showed plainly. On this basis we decided that they were immature Bonaparte's Gulls.

Rosalind Morris, Lincoln

Bald Eagles. On February 13, George W. Brown, Randy Brown, and Ronnie Marrow of Kearney drove on the south side of the Platte River from Kearney to Lexington, checking the bridges at Kearney, Odessa, Elm Creek, Overton, and Lexington. They saw 35 mature and 5 immature Bald Eagles, as well as about 10,000 Mallards, 300 Canada Geese, 200 Sandhill Cranes, 100 Common Mergansers, and 55 Bobwhites. They also saw Marsh and Sparrow Hawks, Franklin Gulls, Kingfisher, Flicker, Horned Lark, Chickadee, Robin, Starling, Meadowlark, Cardinal, Junco, and Tree Sparrow.

On February 20 Mr. and Mrs. Lynn Mastin of Kearney went on the north side of the Platte from Kearney to Jeffrey Canyon, south of Brady, and counted 53 Eagles.

On February 22, Glenn H. LeDioyt of Omaha saw 32 Bald Eagles on Lake Ogallala (Keith County), 6 along the Platte west of Paxton, and 11 more along the Platte from Maxwell to Cozad - a total of 49 for the day.

In a letter dated March 28 Lee Morris of Bradshaw wrote "On a recent trip to North Platte we counted 21 Bald Eagles from North Platte to Kearney on our way home just as we drove along on the Interstate."

Pigmy Nuthatch. There was a Pigmy Nuthatch here on January 28 and again on February 7. The first time it was in front of the house and I heard it and couldn't figure out what it was until I saw it, for its note is certainly different from that of the other nuthatches. The plain brown cap, clear underparts, and size were most distinctive. On the second occasion I saw it flying from the feeder and it lit in the pine tree just outside my window. No eye stripe, just a plain brown cap and white underparts. The size is certainly comparable to that of the Red-breasted and I may have seen it several times and not noticed it.

Carol Kinch, Lincoln

IN MEMORIAM

Mr. A. M. Jones, a member of the Brooking Bird Club and of the Nebraska Ornithologists' Union, died March 21, 1966, at the age of 86 years.

He took part in many civic activities, the one of most interest to members of NOU being the Hastings Museum. He was one of the trustees who signed the Hastings Museum Articles of Incorporation in 1926 and served on the board for many years. It was after he became president of the board that the first steps were taken which led to the construction of the present building.

1965 (EIGHTH) FALL RECORD REPORT

Two hundred forty six species are listed in this report. The count might be increased by more definite identification of the Empidonax flycatchers, and would be increased by splitting the Flickers. The 1964 Fall Report listed 258 species (erroneously reported as 248 in *NBR* 33:34). Reports were received from Dawes and Brown Counties in 1964 but not in 1965, and from Gage County in 1965 but not in 1964. Brown County was the only area to report the Prothonotary Warbler and Snow Bunting in 1964; Dawes County was the only area to report White-winged Junco in 1964. No species was reported only from Gage County in 1965. Two hundred twenty six species were reported both years; 20 were reported for 1965 but not for 1964: White-winged Scoter, Hooded Merganser, Pigeon Hawk, Common Gallinule, White-rumped Sandpiper, California and Bonaparte's Gulls, Saw-whet Owl, Poor-will, White-throated Swift, Scissor-tailed and Yellow-bellied Flycatchers, Gray-cheeked Thrush, Bohemian Waxwing; Black-throated Blue, Cerulean, Bay-breasted, and Palm Warblers; Common Redpoll, and Red Crossbill; and 32 were reported for 1964 but not for 1965: Little Blue Heron, Common Egret, Least Bittern, Goshawk, Osprey, Virginia Rail, Piping and Black-bellied Plover, Long-billed Curlew, Willet, Stilt and Western Sandpipers, Wilson's and Northern Phalaropes, Forster's Tern, Snowy and Long-eared Owls, Broad-tailed Hummingbird, Traill's and Least Flycatchers, Veery; Prothonotary, Blue-winged, Black-throated Green, Blackburnian, Chestnut-sided, Blackpoll, MacGillivray's, and Canada Warblers; Black-headed Grosbeak, White-winged Junco, and Snow Bunting.

The information is presented in a rough west (left column) to east (right column) order, with areas of about the same longitude presented in a north to south order. Two dates indicate the first and last record for that area. The symbols used are:

for the months Jl, Au, S, O, N, and D.

(S) - to indicate a species which arrived before July 1

(W) - to indicate a species which arrived in the fall and stayed past December 31

P to indicate a species which is present all the year, although the same individual birds may not be present during the whole year, and the numbers present may vary greatly between summer and winter.

The reporting counties, contributors, and special comments are:

Adams (Central), Hastings. 134 species. Miss Vera Maunder for the Brooking Bird Club.

Adams (Southwest), Holstein. 129 species. Harold Turner (reporter) and Elwin Turner. The last date for Brown Thrasher comes from an individual bird which lingered a month after the main migration had passed. A flock of Cowbirds was seen December 23.

Cass, Plattsmouth. 135 species. Mrs. Gertrude Wood (reporter), Mrs. Lorene Heineman, Jean Schnieder, Gary Brown. The waterfowl records are from the Plattsmouth Waterfowl Management Area. Mr. Brown, the manager, gave peak numbers as 400 White Pelicans in October, and 500 Canada Geese, 55,000 Snow Geese, 55,000 Blue Geese, and 35,000 Mallards in December. He also supplied the dates for the Woodcock.

Douglas-Sarpy, Omaha and Bellevue. 168 species. C. H. Swanson,

text continued on page 58

	Scotts Bluff	McPh	Linc	Adams		Lanc	Gage	Doug Sarpy	Cass	Nem
				SW.	Cen.					
Common Loon	--	--	N 6	--	Jl 14	--	--	--	--	--
Horned Grebe	--	--	O 23 N 6	--	--	--	--	--	--	--
Eared Grebe	--	--	O 23 O 25	--	--	O 3	--	--	--	--
Western Grebe	O 9	--	O 20 N 6	--	--	--	--	O 21	--	--
Pied-billed Grebe	O 9 O 10	--	O 15 N 29	O 1 O 3	Au 31 O 25	O 3 O 24	--	(S)- N 18	N 8 N 10	S 18
White Pelican	--	--	--	--	--	--	--	O 21 N 15	O 13 O 14	--
Double-crested Cormorant	(S)- Au 21	--	O 20 O 25	--	O 1 O 6	O 3	--	O 21	O 2 O 23	--
Great Blue Heron	(S)- D 30	--	P	S 10 S 28	Jl 1 O 30	--	N 26	Jl 29 O 20	(S)- N 15	Au 19 O 14
Green Heron	--	--	--	--	--	(S)- S 26	--	(S)- O 1	(S)- S 3	--
Snowy Egret	--	--	--	--	--	--	--	--	S 3	--
Black-crowned Night Heron	Au 21	--	--	--	--	--	--	N 15	--	--
Yellow-crowned Night Heron	--	--	--	--	--	S 11 O 3	--	--	--	--
American Bittern	--	--	--	--	S 3 O 25	--	--	O 7	(S)- Au 3	--
Canada Goose	N 16 D 1	--	O 10 - W	O 17 O 18	--	--	--	S 17 O 31	P	O 17
White-fronted Goose	--	--	--	O 17 O 18	--	--	S 28	--	D 21 D 23	--
Snow Goose	--	--	--	--	--	-- O 3	O 2	O 1 D 6	P	O 2 O 28
Blue Goose	--	--	--	--	--	O 3	O 2	O 1 D 6	O 2 - W	O 28
Mallard	S 26 - W	--	P	O 1 D 1	Au 29 - W	P	--	O 10 D 4	P	O 24
Gadwall	--	--	N 10 N 13	O 19 N 3	O 15 - W	--	--	O 10 O 21	O 24 O 29	--
Pintail	Au 21	--	O 10	O 13	Jl 6 N 28	--	--	O 5 O 21	O 7 D 5	--
Green-winged Teal	O 9	--	N 6	O 13 N 2	Jl 6 O 25	D 26	--	S 18 O 27	O 24 D 30	--
Blue-winged Teal	O 9	--	(S)- O 10	Au 26 S 15	(S)- D 31	(S)- O 3	--	Au 26 O 5	O 24 O 29	S 22
American Widgeon	--	--	O 27 N 23	O 19	O 2 D 31	O 3	--	O 21	O 24 O 29	--
Shoveler	Au 21 O 9	--	(S)- O 10	S 19 O 20	S 22 D 31	N 7	--	O 14	O 12 D 16	--
Wood Duck	--	--	--	--	--	--	--	(S)- N 4	N 18 D 8	--
Redhead	O 9	--	O 25 N 6	--	D 31	--	--	O 21 N 2	N 15 D 23	--
Ring-necked Duck	--	--	--	--	D 6 D 31	--	--	O 21	O 24 N 30	--
Canvasback	--	--	O 21	--	D 2 D 31	--	--	--	N 30	--
Lesser Scaup	O 9	--	N 6	--	N 6 D 31	O 3 N 7	--	O 21 N 21	N 30 D 23	--
Common Goldeneye	D 30 - W	--	N 14 - W	--	O 2 D 31	D 31	--	--	--	--
Bufflehead	--	--	--	--	O 2 D 31	N 7	--	--	N 30	--
White-winged Scoter	--	--	N 30	O 7 O 20	--	--	--	--	--	--
Ruddy Duck	O 9	N 7	N 6	--	O 9 D 31	--	--	O 21 N 2	N 28	--

	Scotts Bluff	McPh	Linc	Adams		Lanc	Gage	Doug Sarpy	Cass	Nem
				SW.	Cen.					
Hooded Merganser	--	--	N 6 N 20	N 14 N 16	--	--	--	--	0 26	--
Common Merganser	0 9 - W	--	0 10 - W	--	--	--	--	N 15 D 17	N 15 D 28	--
Red-breasted Merganser	--	--	--	--	--	--	--	--	0 24	--
Turkey Vulture	Jl 15	--	(S)- S 30	0 3	--	--	Au 3 P	--	(S)- S 8	--
Sharp-shinned Hawk	--	--	--	S 5 0 31	S 25 D 31	--	--	--	N 28	--
Cooper's Hawk	--	--	--	S 28 0 8	--	--	--	0 7	0 31	--
Red-tailed Hawk	(S)- 0 9	--	P	P	0 3 D 31	P	P	P	P	P
Red-shouldered Hawk	--	--	--	--	--	--	--	P	--	--
Broad-winged Hawk	--	--	--	--	0 3 N 9	--	--	(S)- Au 13	--	--
Swainson's Hawk	--	--	(S)- 0 17	(S)- S 23	S 12 S 30	--	--	--	--	--
Rough-legged Hawk	D 30 - W	--	0 14 - W	W	Au 31 D 29	D 26 - W	--	S 17	N 15 N 17	--
Ferruginous Hawk	--	--	--	Au 5 S 15	--	--	--	--	N 14	--
Golden Eagle	S 6 D 30	--	D 20 - W	--	--	--	--	--	--	--
Bald Eagle	D 27 - W	--	N 29 - W	N 21	--	--	--	N 30 D 17	0 22 - W	--
Marsh Hawk	P	--	P	S 10 - W	P	P	D 26	Au 10 N 21	P	P
Prairie Falcon	--	--	N 30 - W	S 2 - W	S 25	--	--	--	--	--
Peregrine Falcon	--	--	--	--	--	--	--	--	0 26	--
Pigeon Hawk	--	--	0 23 - W	--	--	--	--	--	--	--
Sparrow Hawk	P	--	P	P	P	P	P	P	P	P
Greater Prairie Chicken	--	S	P	--	--	--	--	--	--	--
Sharp-tailed Grouse	--	P	--	--	--	--	--	--	--	--
Bobwhite	P	--	P	P	P	P	P	P	P	P
Ring-necked Pheasant	P	P	P	P	P	P	P	P	P	P
Chukar	--	--	--	--	--	--	--	S 18	--	--
Turkey	P	--	--	--	--	--	--	--	--	--
Sandhill Crane	S 29 0 8	--	0 25 N 5	0 6 N 6	0 25 N 13	--	--	--	--	--
Sora	--	--	--	--	Au 29 0 3	(S)- S 11	--	--	--	--
Common Gallinule	--	--	--	--	--	--	--	Au 12	--	--
American Coot	(S)- 0 9	--	0 21 N 30	--	Jl 6 N 7	0 3 D 21	--	S 14 N 15	Au 3 N 8	--
Semipalmated Plover	--	--	--	--	0 5	--	--	--	--	--
Killdeer	(S)- D 18	--	(S)- 0 15	(S)- 0 18	(S)- D 29	(S)- 0 24	(S)- 0 5	(S)- N 7	(S)- N 19	(S)- Au 15
American Golden Plover	--	--	--	--	--	--	--	0 6	--	--
American Woodcock	--	--	--	--	--	--	--	--	0 31 N 1	--
Common Snipe	Au 21 S 18	--	--	--	0 9 N 6	--	--	0 14 N 21	S 8	--
Upland Plover	--	--	--	(S)- Au 28	--	--	--	Au 12	--	--
Spotted Sandpiper	Au 21	--	--	--	0 2	(S)- S 11	--	Au 17 S 17	Jl 10 Au 16	--

	Scotts Bluff	McPh	Linc	Adams		Lanc	Gage	Doug Sarpy	Cass	Nem
				SW.	Cen.					
Solitary Sandpiper	Au 9 Au 30	--	--	Jl 5 Au 22	Au 29	S 11	0 2	--	--	--
Greater Yellowlegs	S 10 0 10	--	--	--	Jl 6 0 15	--	--	0 14	--	--
Lesser Yellowlegs	S 3 0 10	--	--	--	--	S 6	--	Au 12	Jl 16	--
Pectoral Sandpiper	--	--	--	--	Au 31 N 3	--	--	Au 12	--	--
White-rumped Sandpiper	--	--	--	--	--	--	--	Au 12	Jl 14 Au 3	--
Baird's Sandpiper	--	--	0 10	--	Au 15 N 6	--	--	--	Jl 14 Jl 18	--
Least Sandpiper	--	--	--	--	S 1	--	--	--	Jl 14	--
Dowitcher Sp.	--	--	--	--	0 9 N 6	--	--	0 27	--	--
Semipalmated Sandpiper	--	--	--	--	0 15	--	--	--	S 3 S 6	--
Sanderling	--	--	0 10	--	--	--	--	--	--	--
American Avocet	--	--	--	--	Au 29 S 15	--	--	Au 26	--	--
Herring Gull	--	--	P	--	--	--	--	--	N 14 N 16	--
California Gull	--	--	0 25	--	--	--	--	--	--	--
Ring-billed Gull	Au 5 D 5	--	P	--	0 9	--	--	0 10 D 3	0 26 N 19	--
Franklin's Gull	Au 21 S 26	--	(S)- 0 27	0 3 N 23	0 4	--	--	--	0 24	--
Bonaparte's Gull	--	--	0 20	--	--	--	--	--	--	--
Common Tern	--	--	--	--	--	--	--	0 12	--	--
Least Tern	--	--	--	--	--	--	--	--	Jl 4 Au 3	--
Black Tern	Au 21	--	(S)- Jl 3	--	(S)- Au 31	S 6	Au 3 P	S 29	S 7	--
Rock Dove	--	--	P	P	--	P	P	P	P	--
Mourning Dove	(S)- D 30	--	(S)- 0 15	(S)- N 1	(S)- D 29	P	(S)- 0 16	(S)- D 3	(S)- D 29	(S)- 0 15
Yellow-billed Cuckoo	(S)- Au 21	--	(S)- S 17	(S)- S 10	Jl 1	(S)- 0 3	(S)- Jl 31	(S)- S 10	(S)- Au 20	(S)- 0 1
Black-billed Cuckoo	(S)- 0 9	--	(S)- S 14	(S)	--	--	(S)- Jl 14	(S)- S 1	(S)- S 17	(S)- S 7
Barn Owl	--	--	--	--	N 9	P	--	--	--	--
Screech Owl	P	--	Au 16 Au 25	0 15 N 19	Jl 1 N 13	P	S 4 0 9	P	P	P
Great Horned Owl	P	P	P	P	N 6 D 29	P	P	P	P	P
Burrowing Owl	(S)- Jl 5	--	--	--	(S)- N 9	(S)- Jl 15	--	--	--	--
Barred Owl	--	--	--	--	--	--	--	P	P	--
Short-eared Owl	--	--	--	N 25 - W	--	--	--	--	--	--
Saw-whet Owl	--	--	--	--	--	--	--	D 2	--	--
Whip-poor-will	--	--	--	--	--	--	--	--	--	(S)- Jl 9
Poor-will	Jl 10 Jl 20	--	--	--	--	--	--	--	--	--
Common Nighthawk	(S)- S 25	--	(S)- Jl 14	(S)- S 15	(S)- 0 7	(S)- S 12	(S)- 0 3	(S)- 0 1	(S)- S 2	(S)- S 8
Chimney Swift	(S)- Au 5	--	(S)- 0 12	(S)- S 15	(S)- 0 7	(S)- 0 3	(S)- 0 7	(S)- 0 10	(S)- 0 2	(S)- 0 3
White-throated Swift	(S)- Jl 18	--	--	--	--	--	--	--	--	--

	Scotts Bluff	McPh	Linc	Adams		Lanc	Gage	Doug Sarpy	Cass	Nem
				SW.	Cen.					
Ruby-throated Hummingbird	--	--	(S)- Au 14	--	--	--	Au 27 S 8	(S)- S 17	(S)- S 4	--
Belted Kingfisher	P	--	P	0 1	P	P	Jl 31 N 20	(S)- D 21	(S)- D 23	D 1 D 31
Flicker	P	--	P	P	P	P	P	P	P	P
Red-bellied Woodpecker	--	--	--	P	P	P	P	P	P	--
Red-headed Woodpecker	(S)- S 6	--	(S)- S 9	(S)- 0 2	(S)- S 14	(S)- 0 3	(S)- S 21	(S)- S 19	(S)- S 8	(S)- D 5
Yellow-bellied Sapsucker	--	--	--	--	--	S 26 - W	--	--	--	--
Hairy Woodpecker	P	--	P	P	P	P	P	P	P	--
Downy Woodpecker	P	--	P	P	P	P	P	P	P	P
Eastern Kingbird	(S)- Au 5	--	(S)- S 12	(S)- S 4	(S)- 0 12	(S)- S 6	(S)- Au 26	(S)- S 5	(S)- S 12	(S)- S 1
Western Kingbird	(S)- S 13	--	(S)- S 9	(S)- Au 31	(S)- Au 15	--	(S)- Au 12	(S)- S 2	(S)- Au 2	(S)- Jl 5
Cassin's Kingbird	S 6 S 15	--	--	--	--	--	--	--	--	--
Scissor-tailed Flycatcher	S 28	--	S 25 0 2	--	--	--	--	--	--	--
Great Crested Flycatcher	--	--	--	(S)	(S)- Jl 1	--	(S)- Au 26	(S)- 0 1	(S)- Jl 28	(S)- Jl 1
Eastern Phoebe	Au 30	--	(S)- S 24	(S)- S 5	(S)- Jl 6	(S)- S 26	--	(S)- 0 1	(S)- Au 18	(S)- S 26
Say's Phoebe	(S)- S 6	--	(S)- 0 19	(S)- S 3	(S)- Jl 1	--	--	--	--	--
Empidonax Sp.	--	--	--	Au 26 S 14	--	--	--	--	--	--
Yellow-bellied Flycatcher	--	--	--	Au 31	--	--	--	--	--	--
Acadian Flycatcher	--	--	--	--	--	--	--	(S)- 0 1	--	--
Eastern Wood Pewee	--	--	--	Au 13 S 10	(S)- 0 4	--	(S)- Au 3	(S)- S 17	(S)- Au 25	(S)- Jl 5
Western Wood Pewee	(S)- 0 9	--	--	--	--	--	--	--	--	--
Horned Lark	P	P	P	P	P	P	P	P	P	N 2
Bank Swallow	--	--	--	--	S 25	--	--	Au 26 S 17	(S)- 0 12	--
Rough-winged Swallow	Jl 1 Au 21	--	--	--	Jl 1	(S)- S 11	--	(S)- S 17	(S)- Au 23	--
Barn Swallow	(S)- S 13	--	(S)- S 20	(S)- 0 5	(S)- 0 2	(S)- 0 10	(S)- S 25	(S)- 0 14	(S)- S 12	(S)- Au 24
Cliff Swallow	(S)- Au 21	--	--	--	S 17	--	--	(S)- S 5	(S)- S 1	(S)- Jl 5
Purple Martin	--	--	(S)- 0 1	Au 28	(S)- Au 24	(S)- Au 5	(S)- Au 20	(S)- S 22	(S)- Au 28	(S)- Au 31
Blue Jay	P	--	P	(S)- N 6	P	P	P	P	P	P
Black-billed Magpie	P	--	P	P	P	--	--	--	--	--
Common Crow	P	--	P	P	P	P	P	P	P	P
Pinnon Jay	P	--	--	--	--	--	--	--	--	--
Black-capped Chickadee	P	--	P	P	P	P	P	P	P	P
Tufted Titmouse	--	--	--	--	--	P	(S)- Au 26	P	P	P
White-breasted Nuthatch	D 30 - W	--	0 18 - W	W	S 15 - W	P	P	P	P	P
Red-breasted Nuthatch	0 9 - W	0 22	0 14 - W	--	S 16 - W	0 3 - W	--	S 22 D 4	D 8 - W	--
Brown Creeper	D 24 - W	N 23	0 22 - W	--	0 28 D 29	D 26 - W	0 13 - W	S 22 - W	0 15 - W	0 17 - W

	Scotts Bluff	McPh	Linc	Adams		Lanc	Gage	Doug Sarpy	Cass	Nem
				SW.	Cen.					
House Wren	(S)- S 13	--	(S)- S 5	(S)- O 18	(S)- O 5	(S)- S 26	(S)- O 2	(S)- O 7	(S)- Au 19	(S)- S 15
Winter Wren	--	--	--	--	--	O 3 - W	D 26	O 20 - W	--	--
Bewick's Wren	--	--	--	--	Jl 5	--	--	O 23	--	--
Carolina Wren	--	--	--	Jl 13	--	--	--	Jl 10 D 17	--	Jl 5
Long-billed Marsh Wren	--	--	--	--	--	S 11	--	--	--	--
Short-billed Marsh Wren	--	--	--	--	--	S 11	--	--	--	--
Rock Wren	(S)- O 2	--	--	--	--	--	--	--	--	--
Mockingbird	(S)- D 30	--	P	--	--	D 26 - W	--	--	(S)- Jl 24	Jl 25 Au 27
Catbird	S 18	--	--	(S)- S 30	(S)- S 28	(S)- S 26	(S)- S 9	(S)- O 7	(S)- S 21	(S)- S 13
Brown Thrasher	(S)- S 18	--	(S)- S 6	(S)- N 19	(S)- D 4	(S)- O 3	(S)- O 6	(S)- O 20	(S)- S 2	(S)- S 8
Sage Thrasher	O 12	--	--	--	--	--	--	--	--	--
Robin	P	O 14 D 28	P	P	P	P	P	P	(S)- D 22	P
Wood Thrush	--	--	--	--	--	--	--	(S)- O 1	--	(S)- Jl 9
Hermit Thrush	--	--	--	--	--	--	--	O 6	--	--
Swainson's Thrush	S 18	O 14 N 3	--	--	S 22 S 24	--	--	--	--	--
Gray-cheeked Thrush	--	--	--	--	--	S 26	--	O 20	--	--
Eastern Bluebird	--	--	P	(S)- N 19	S 25 O 3	(S)- O 17	(S)- O 30	P	P	P
Mountain Bluebird	(S)- Jl 1	--	--	--	--	--	--	--	--	--
Townsend's Solitaire	S 13 - W	--	N 27 - W	--	--	--	--	--	--	--
Blue-gray Gnatcatcher	--	--	--	S 15	--	--	--	--	--	--
Golden-crowned Kinglet	D 30 - W	O 23	N 1 - W	O 21 N 22	O 22 - W	O 17 - W	O 11 - W	O 1 - W	D 7 - W	--
Ruby-crowned Kinglet	--	O 14 O 19	D 10 - W	O 18 O 19	O 16	O 3	--	O 6 O 28	--	--
Water Pipit	O 9	--	O 21	O 19 N 6	--	--	--	O 27	--	--
Sprague's Pipit	--	--	--	S 14 O 23	--	--	--	--	--	--
Bohemian Waxwing	D 27 - W	--	--	--	N 26	--	--	--	--	--
Cedar Waxwing	D 18 - W	--	O 14 - W	--	O 4 - W	D 26 - W	S 1 N 15	S 17 N 4	Jl 21 S 26	--
Northern Shrike	O 25 - W	--	N 17 N 30	D 20	--	--	--	--	--	--
Loggerhead Shrike	(S)- S 13	--	(S)- O 26	(S)	Jl 1 S 12	P	(S)- Au 21	(S)- Au 26	Jl 21 S 26	Au 15 S 6
Starling	P	N 24	P	P	P	P	P	P	P	P
White-eyed Vireo	--	--	--	--	--	--	--	(S)- S 1	--	--
Bell's Vireo	--	--	--	(S)- S 18	--	--	--	(S)- S 17	(S)- Au 8	--
Yellow-throated Vireo	--	--	--	Au 19	--	--	--	(S)- S 1	--	--
Solitary Vireo	--	--	--	--	--	--	--	Jl 22 O 6	--	--
Red-eyed Vireo	Jl 1 Au 21	--	--	--	(S)- Jl 1	--	(S)- Au 26	(S)- S 22	(S)- Au 1	--

	Scotts Bluff	Mcph	Linc	Adams		Lanc	Gage	Doug Sarpy	Cass	Nem
				SW.	Cen.					
Warbling Vireo	--	--	--	(S)- S 5	(S)- Jl 1	--	(S)- Au 4	(S)- S 17	(S)- Au 10	--
Black-and-white Warbler	--	--	--	--	S	S 26	--	--	--	--
Tennessee Warbler	--	--	--	--	--	--	--	S 2	--	--
Orange-crowned Warbler	--	--	--	S 17 0 23	S 25 0 17	0 3	--	0 1	--	--
Nashville Warbler	--	--	--	S 15 0 1	S 28 0 15	0 3	--	Au 31 0 7	--	--
Yellow Warbler	(S)- Au 27	--	(S)- S 15	(S)- S 8	(S)- S 16	--	--	(S)- Au 17	(S)- Au 31	Jl 1
Magnolia Warbler	--	--	S 25 0 1	Au 28 S 9	--	--	0 16	S 22	--	--
Black-throated Blue Warbler	--	--	--	--	--	--	--	0 12	--	--
Myrtle Warbler	0 3 0 9	--	0 18 D 12	S 22 0 23	0 4 0 15	0 17	0 2	0 1 N 15	0 21 0 29	--
Audubon's Warbler	0 9	--	0 22 0 23	--	--	--	--	--	--	--
Cerulean Warbler	--	--	--	--	--	--	--	(S)- Au 13	--	--
Bay-breasted Warbler	--	--	--	--	--	--	--	0 14	--	--
Palm Warbler	--	--	--	--	--	--	--	0 1	--	--
Ovenbird	--	--	--	--	--	--	--	(S)- S 11	Jl 22 Jl 25	--
Louisiana Waterthrush	--	--	--	--	--	--	--	Jl 4 Au 19	--	--
Kentucky Warbler	--	--	--	--	--	--	--	S 1	--	--
Connecticut Warbler	--	0 14	--	--	--	--	--	--	--	--
Mourning Warbler	--	--	--	--	--	--	--	0 1	--	--
Yellowthroat	(S)- 0 9	--	--	S 7 S 12	Jl 14	S 26	(S)- Au 8	(S)- S 22	(S)- Au 10	(S)- Au 10
Yellow-breasted Chat	--	--	--	S 6 0 1	--	--	--	(S)- S 1	(S)- Jl 28	--
Wilson's Warbler	Au 31 0 9	--	--	S 17 0 1	S 23	S 26	--	Au 29 S 22	--	--
American Redstart	Au 23 0 9	--	--	S 5 S 17	--	S 26	--	(S)- S 11	(S)- Au 29	--
House Sparrow	P	P	P	P	P	P	P	P	P	P
Bobolink	--	--	(S)- Au 26	--	Au 22 Au 31	--	--	(S)- Jl 13	Jl 5	--
Eastern Meadowlark	--	--	(S)- Fall	(S)	--	--	P	(S)- 0 10	P	P
Meadowlark Sp.	--	--	--	--	--	--	--	P	--	--
Western Meadowlark	P	--	P	P	P	P	P	(S)- N 7	P	P
Yellow-headed Blackbird	(S)- S 26	--	(S)- N 29	--	Jl 6	--	--	(S)- Au 31	Jl 29	--
Redwinged Blackbird	P	W	P	P	P	(S)- 0 24	(S)- 0 29	(S)- N 24	(S)- N 22	(S)- Jl 2
Orchard Oriole	(S)- Au 21	--	(S)- S 1	(S)- S 24	(S)- 0 9	--	(S)- Jl 26	(S)- Au 18	(S)- Au 16	(S)- S 5
Baltimore Oriole	--	--	(S)- S 1	(S)- S 30	(S)- S 4	(S)- S 6	(S)- S 15	(S)- S 11	(S)- S 22	(S)- S 3
Bullock's Oriole	(S)- Au 31	--	--	--	--	--	--	--	--	--
Rusty Blackbird	--	--	--	D 18	D 29	--	--	N 2 D 28	--	--
Brewer's Blackbird	0 9	0 30	0 10 - W	N 15	N 28	--	--	0 14 D 17	--	--
Common Grackle	(S)- 0 9	--	(S)- N 9	(S)- D 8	P	(S)- N 14	(S)- N 27	(S)- N 24	(S)- N 28	(S)- 0 5

	Scotts Bluff	McPh	Linc	Adams		Lanc	Gage	Doug Sarpy	Cass	Nem
				SW.	Cen.					
Brown-headed Cowbird	(S)- 0 9	--	(S)- 0 15	(S)- N 6	P	(S)- 0 3	(S)- 0 23	(S)- N 4	(S)- Au 28	(S)- 0 11
Western Tanager	Au 28	--	--	--	--	--	--	--	--	--
Scarlet Tanager	--	--	--	--	--	--	--	(S)- Jl 15	--	--
Cardinal	--	--	P	P	P	P	P	P	P	P
Rose-breasted Grosbeak	--	--	--	--	(S)- Jl 1	(S)- S 26	(S)- Au 26	(S)- 0 1	(S)- Au 28	--
Blue Grosbeak	(S)- Au 5	--	--	(S)- S 10	--	--	--	(S)- Au 26	--	--
Indigo Bunting	--	--	--	--	--	--	(S)- Au 21	(S)- S 22	(S)- Au 12	(S)- Jl 30
Dickcissel	(S)- Au 30	--	(S)- Au 26	(S)- 0 8	(S)- Jl 23	--	(S)- Au 21	(S)- S 19	(S)- S 2	(S)- Au 10
Evening Grosbeak	D 20 - W	--	0 23 - W	--	--	--	--	S 3 S 5	--	--
Purple Finch	--	--	0 27 - W	S 31	D 11 - W	0 17 - W	--	0 1 - W	--	--
House Finch	P	--	--	--	--	--	--	--	--	--
Common Redpoll	--	N 9	N 30 - W	0 24 - W	N 28 D 31	--	--	--	--	--
Pine Siskin	0 4 - W	0 17 D 9	0 30 - W	S 11 - W	0 24 - W	0 17 - W	--	0 12 - W	--	--
American Goldfinch	P	0 24 - W	P	P	P	P	P	P	P	P
Red Crossbill	--	--	D 6 - W	--	--	--	--	--	--	--
Rufous-sided Towhee	(S)- S 25	0 20	(S)- S 24	S 16 0 23	N 7 - W	S 26 D 26	--	(S)- N 4	(S)- Au 29	--
Lark Bunting	(S)- Au 21	--	(S)- Au 26	(S)	--	--	(S) Au 2j	--	--	--
Savannah Sparrow	S 25	0 23	0 10	Au 18 0 25	S 27	0 3	--	0 5 N 21	0 26	--
Grasshopper Sparrow	--	--	--	(S)- 0 18	N 6	--	(S)- 0 13	(S)- Au 26	(S)- Au 18	--
Baird's Sparrow	--	--	0 10	0 8 N 1	--	--	--	--	--	--
Le Conte's Sparrow	--	--	--	S 25 0 18	S 29	--	--	--	Au 28	--
Henslow's Sparrow	--	--	--	S 13 0 15	--	--	--	--	--	--
Vesper Sparrow	Jl 1 0 9	--	S 27 0 10	S 22 0 19	S 25	--	--	0 5 0 14	--	--
Lark Sparrow	(S)- 0 9	--	(S)- S 9	(S)- S 12	(S)- Jl 1	--	Jl 26	(S)- Jl 6	(S)- Jl 28	--
Slate-colored Junco	0 9 - W	W	0 10 - W	0 5 - W	0 4 - W	S 26 - W	0 21 - W	0 1 - W	0 22 - W	N 7 - W
Oregon Junco	0 9 - W	W	0 13 - W	D 15 - W	N 25 - W	--	--	0 6 - W	--	--
Tree Sparrow	0 9 - W	0 14 - W	0 21 - W	0 13 - W	0 7 - W	0 17 - W	N 13 - W	0 21 - W	0 26 - W	--
Chipping Sparrow	Jl 1 0 9	--	S 25 N 6	(S)- N 6	0 9 0 10	(S)- S 26	(S)- Au 3	(S)- 0 12	(S)- Jl 18	(S)- Au 10
Clay-colored Sparrow	S 25	--	S 25	S 1 0 23	--	0 3	--	0 1	--	--
Field Sparrow	--	--	--	0 1 0 23	--	(S)- 0 17	--	(S)- 0 12	(S)- Jl 19	(S)- Au 11
Harris' Sparrow	S 9 D 30	0 16 N 11	0 7 - W	0 3 - W	0 10 - W	0 3 - W	0 23 - W	0 1 - W	0 21 - W	0 10 - W
White-crowned Sparrow	S 25 - W	0 14 0 26	0 1 0 27	S 17 N 5	N 21 - W	--	--	0 14 N 4	--	--
White-throated Sparrow	0 9	N 15	--	0 13 0 14	0 10	0 3	0 23	0 1 0 4	--	--

	Scotts Bluff	McPh	Linc	Adams		Lanc	Gage	Doug Sarpy	Cass	Nem
				SW.	Cen.					
Fox Sparrow	--	--	--	--	--	0 3	--	0 12 N 4	--	--
Lincoln's Sparrow	--	--	--	S 11 0 22	--	S 26 0 17	0 2 0 23	0 1 N 24	0 26	--
Swamp Sparrow	--	--	--	0 7	--	--	--	--	--	--
Song Sparrow	S 18 0 9	0 16 0 17	0 10 - W	S 7 N 5	0 9 D 31	S 26 - W	0 2 - W	0 14 - W	Jl 2 D 15	--
Lapland Longspur	--	--	--	0 22 - W	D 31	--	N 13 - W	N 7 N 21	--	--
Smith's Longspur	--	--	--	0 5 N 22	--	--	--	--	--	--
Chestnut-collared Longspur	--	--	--	S 25 0 10	--	--	--	--	--	--

Bellevue; J. E. Plank, Council Bluffs, Iowa; J. M. Maikowski, R. F. Ferguson, Ralph Velich, Mrs. Verne Vance, Mr. and Mrs. Dick L. Eilers, Mrs. E. O. Goodson, Mr. and Mrs. R. G. Cortelyou. The Chukar, seen in North Omaha by Mr. Ferguson, probably was a wide-ranging stray from a planted flock which centers around 100th and Pacific (and the same is probably true of most previous local records.) The Saw-whet Owl was seen in a tree about 3 feet outside their window by the Dick Eilers, who had ample time to get reference books and make a close check. A Brown Thrasher, seen in Fontenelle Forest on the Christmas Count and later in 1966, probably was present in late 1965.

Gage, Beatrice, 80 species. Kent Fiala. Two records (marked p) are from Pawnee County and one (marked j) is from Jefferson County.

Lancaster, Lincoln. 102 species. Ralph Harrington for Audubon Naturalists Club.

Lincoln, North Platte and Hershey. 126 species. Mrs. Morris A. Cox, Hershey, Mrs. M. F. Shickley, Mrs. Glenn Viehmeyer, and Mrs. Walt Nielsen, North Platte. Comments on the California and the Bonaparte's Gulls were given in the April issue (pp. 39-40).

McPherson, Tryon. 29 species. Mrs. Oona Bassett. These observations were made after Mrs. Bassett's return to the ranch October 13, and most were made from the windows of her home there.

Nemaha, Auburn. 68 species. Mrs. B. F. Mowery. Mrs. Mowery did not get back to the Missouri River after the July 9 date given for the Whip-poor-will.

Sarpy—see Douglas.

Scotts Bluff, Scottsbluff. 125 species. Mrs. H. A. Banghart, reporter, Mrs. Roy Witschy, Mrs. S. R. Young, Mrs. J. W. Brashear, The Poor-will and Cassin's Kingbird were seen in the Wildcat Hills. The Scissor-tailed Flycatcher was seen under close observation east of Melbeta by Mrs Brashear.

Correction to 1963 Fall Record Report

Delete the Common Redpoll for Cass County. (*NBR* 32:56).

HONORARY MEMBER

Alfred Marshall Bailey was elected to Honorary Membership at the 1966 Annual Meeting. He was born in Iowa City in 1894, was graduated from the State University of Iowa in 1916, and received honorary degrees from Norwich University and the University of Denver. He is a Fellow of the American Ornithologists' Union and of the American Academy for the Advancement of Science.

Dr. Bailey participated in expeditions to Laysan Island, Alaska, and Abyssinia, and was leader of expeditions to Labrador, mid-Pacific Islands, Australia and New Zealand, Ecuador and the Galapagos Islands, and Alaska. He has been director of the Denver Museum of Natural History since 1936, and before that was Director of the Chicago Academy of Science and Curator of Birds and Mammals of the Denver Museum.

He has contributed to *Auk, Condor, Wilson Bulletin, National Geographic Magazine, Audubon Magazine, Pacific Discovery* and is the author of *Birds of Arctic Alaska, Birds of New Zealand, Birds of Midway and Laysan Islands* and co-author (with Robert J. Niedrach, Honorary Member of NOU since 1932) of the recently published two-volume *Birds of Colorado.*

BOOK REVIEWS

BIRDS OF NORTH AMERICA—by Chandler S. Robbins, Bertel Bruun, and Herbert S. Zim, illustrated by Arthur Singer. Golden Press, New York, 1966. 340 pp. $2.95.

This soft-cover book, 4½ by 7½ by ⅝ inches, covers "all species of wild birds likely to be found north of Mexico". This includes the Cattle Egret, casual visitors, and introduced species established in restricted localities. The birds are shown in color (very well done) on one page and on the facing page is a short (usually under 10 lines) paragraph for each species, which may cover abundance, habitat, distinctive marks, calls, nesting habits, and the like. For most birds a range map is shown, giving summer and winter ranges and migratory routes, and for many birds a Sonogram of a typical call is shown. For water, shore, and game birds, hawks, and some others, the illustrations show the birds both sedentary and flying. There are also summary pages (in color) for groups of birds illustrated by typical examples of the various families (e.g., shorebirds, perching birds); heads of warblers, grouped by whether or not they have wingbars; heads of sparrows, grouped by streaked and unstreaked breasts. The inside of the front cover has an index to major families of birds and instructions as to how the page edges can be marked for even faster finding. (It would be even more convenient if the index were on the outside back cover, which would make the inside front cover available for the article on "How to Find More Birds" which is listed in the Table of Contents but apparently was squeezed out by the detailed index at the end of the book.)

In spite of the space saving from the use of range maps, to cover in one volume more than Peterson does in two similarly sized volumes requires elimination or condensation of some information. This reviewer, who has not used the book in the field, misses the lines on Peterson's illustrations and the summary on the facing page of the distinguishing characteristics; on the other hand he appreciates having the flight and sedentary pictures together.

For those who regularly bird in areas where both eastern and western birds may be found, or who take a trip through both areas, it would be very convenient to be able to use just one instead of two volumes. Anyone contemplating buying a field guide for birds should give this book serious consideration. —Ed.

THE BIRDS OF KENTUCKY, by Robert M. Mengel. Ornithological Monographs No. 3, American Ornithologists' Union. 581 pp., 4 color plates, 14 sketches, 39 maps and graphs, 22 tables. $10.00 ($8.00 to A.O.U. members).

The scope of this work is indicated by the chapter headings: Description of the Environment, Distribution of the Breeding Birds of Kentucky, Recent Changes in the Kentucky Avifauna, Bird Distribution in Relation to Certain Environmental Features, Systems of Expressing Bird Distribution, Geographic Variation in Kentucky Breeding Birds, The Origins of the Avifauna: Breeding Birds, The History of Ornithology in Kentucky, and Accounts of the Species. Under the last heading are covered status, breeding records, distribution, seasonal records, geographic variation (not all of the points are covered for all species).

While this book will appeal primarily to those who live in or visit Kentucky or immediately adjacent portions of other states, some of the information (such as nesting habits, clutch size, and the like) probably is applicable to more distant areas, too. —Ed.

BIRDS OF ZION NATIONAL PARK AND VICINITY, by Roland H. Wauer and Dennis L. Carter (Zion Natural History Association, Springdale, Utah, in cooperation with the National Park Service, paperback, 92 pp., $1)

It is not uncommon for a bird watcher to find himself birding in strange territory, hoping for additions to his life list and experiencing a sense of frustration as he wonders how many new birds he may be missing by not knowing where to look for them. Help for this situation is becoming more prevalent as each year brings the publication of more books intended for use as supplements to the field guides. These books do not identify birds, but tell where to look for them in specific localities. A good book of this type can be invaluable to a peripatetic bird watcher and add immeasurably to the pleasure of his travels.

During 1965 NOU members contributed to the publication of two fine books in this category, books which any bird watcher would do well to consult when about to travel into the areas covered. The first of these, THE BIRD WATCHER'S AMERICA, edited by Olin Sewall Pettingill, Jr., contains a chapter by Doris Gates on the birds of the Pine Ridge country in Nebraska. This book has been previously reviewed (NBR 33: 48). Later in the year BIRDS OF ZION NATIONAL PARK AND VICINITY was published, with Dennis Carter as one of the co-authors. This book, covering a relatively small range, is so specific that if one had it along on a trip to Zion it would be almost the equivalent of a personally conducted tour of the park.

After a brief general description of the park there is a more detailed discussion of each of the five types of habitats to be found within the area covered by the book, with comments about where each of these habitats will be found and the bird life typical of each. A map showing the main roads and trails and locating the various place names mentioned in the text is included. There are discussions of the bird migration through the park, the nesting species, and the birds present during each season of the year. The annotated list which follows is very complete and concise in its information.

THE BIRDS OF ZION NATIONAL PARK AND VICINITY is well illustrated with five color plates of paintings by Howard Rollin, a Colorado bird artist who specializes in painting the western birds, and by color photos, most of which were taken by Mr. Wauer. These are exceptionally well produced.

Mr. Carter and Mr. Wauer have both been Park Naturalists in Zion in recent years (Mr. Carter is now at Arches National Monument). Both have an intensive interest in birds and have added much to the knowledge of the birds of Zion. Their records have been combined with those of other ornithologists to produce this excellent guide to bird finding. —Gail Shickley

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1965 NEST CARD SURVEY

Roger S. Sharpe

In 1965 the Nebraska Ornithologists' Union cooperated with the Cornell Laboratory of Ornithology in the first annual Nest Card Survey. The purpose of this survey is to gather nesting data on North American birds. Nesting data such as number of eggs and young, nest locality and nesting habitat are recorded on a card for each nest found. The cards are printed with blanks for each category of desired data to facilitate recording. At the end of the nesting season, the regional coordinator gathers the cards which are subsequently shipped to Cornell for cataloging and analyses.

It should not be surprising to anyone that little is known about the nesting biology of many of our birds. It is the hope of the people at Cornell that with the use of this card system this much needed information may be gathered. The data will be compiled and transferred to data processing equipment for cataloging. As the Nest Card program progresses, increasing information will be added to this storehouse for every bird species. The more information gathered for each bird species, the more we will know about each species' breeding biology. The records at Cornell will be available to any ornithologist who is studying a species' breeding biology. Such information as geographic variation in number of eggs, length of incubation, fledging time, nest success and variation in nesting habitat may be determined with adequate data from all parts of North America.

The Nebraska Ornithologists' Union is gathering nesting information on Nebraska birds. We in Nebraska will benefit by cooperating in this program. We know very little about the breeding biology of a great many of our nesting birds. Without regarding nesting habits, we know very little about the distribution of each nesting bird species in the state. This card system will give members a handy recording device which can be carried on every field trip. Each spring and summer each member encounters bird nests in the field. A simple check as to contents and a notation of the habitat will increase each recorder's awareness regarding the nesting biology of that bird. Future checks of that nest will yield further and more complete information about that bird's nesting activities.

A good example of the information gained from such nest inspections has been compiled from data gathered by Harold Turner of Holstein, Nebraska on nine Barn Swallow (*Hirundo rus-*

tica) nests during the 1965 nesting season. The earliest date that he recorded eggs in the nest was June 10. The last date for nesting activities of the latest nest was August 26th. The nine nests averaged 4.8 eggs per nest. An average of 4.3 young per nest were fledged. His data also indicates that the Barn Swallow lays one egg per day and that the parents begin incubation when the first egg is laid because the young tend to leave the nest on successive days. His data also indicates that the incubation period is about fourteen days, and that a young bird remains in the nest for about ten days before it fledges. The following is a sample of one of his records: This nest was under the eaves of a farm-building at Holstein, Nebraska.

Date	Number of Eggs	Number of Young
July 20, 1965	1	0
July 21	2	0
July 22	3	0
July 23	4	0
August 4	4	0
August 5	2	2
August 6	1	3
August 7	0	4
August 19	0	4
August 20-23	0	3
August 24	0	1
August 25	0	0

This, of course, is very complete nest data. Many of us, however, cannot make daily visits to a nest. Most of us feel fortunate to take weekly field trips. If only one nest check is made, the information should be recorded, however. Such data are valuable when a large number of similar records are gathered and analyzed for a given species, for the total information may yield the entire story of its nesting biology.

I am the Nebraska coordinator for the North American Nest Card Survey, representing the Nebraska Ornithologists' Union. As I receive the cards at the end of the nesting season, I transfer nesting data from each card onto cards which will be on file in the NOU library. After several years the accumulated information will be analyzed and condensed to give Nebraska birders more information about our nesting birds.

The following individuals returned cards for the 1965 nesting season, recording 210 nests of 53 species: Johnny Anderson, Lawrence Blus, R. G. Cortelyou, Mrs. R. R. Damerell, Mrs. John Lueshen, Vera Maunder, Mrs. O. W. Ritchey, Roger Sharpe, Gail Shickley, James Tate, Harold Turner, Mrs. Glen Viehmeyer.
The following is a partial resume of the results:

Species	Number of Nests	County
Eared Grebe *Podiceps caspicus*	18	Garden
Double-crested Cormorant *Phalacrocorax auritus*	17	Garden
Black-crowned Night Heron *Nycticorax nycticorax*	22	Garden
Red-tailed Hawk *Buteo jamaicensis*	1	Lancaster
Swainson's Hawk *Buteo swainsoni*	1	Thomas
Greater Prairie Chicken *Tympanuchus cupido*	1	Blaine
Sharp-tailed Grouse *Pediocetes phasianellus*	1	Blaine
	1	Thomas
American Coot *Fulica americana*	2	Garden

Species	**Number of Nests**	**County**
Killdeer *Charadrius vociferus*	1	Adams
	1	Garden
American Avocet *Recurvirostra americana*	1	Garden
Franklin's Gull *Larus pipixean*	1	Garden
Forster's Tern *Sterna forsteri*	1	Garden
Black Tern *Chlidonias nigra*	1	Garden
Mourning Dove *Zenaidura macroura*	14	Adams
	1	Blaine
	13	Cuming
	2	Lancaster
	1	Lincoln
	1	Seward
	2	Thomas
Rock Dove *Columbia livia*	1	Seward
Black-billed Cuckoo *Coccyzus erythrophthalmus*	1	Adams
	1	Seward
Barn Owl *Tyto alba*	1	Lincoln
Great-horned Owl *Bubo virginianus*	2	Lincoln
Common Nighthawk *Chordeiles minor*	1	Loup
Flicker *Colaptes sp.*	1	Adams
Eastern Kingbird *Tyrannus tyrannus*	1	Adams
	1	Seward
Western Kingbird *Tyrannus verticalis*	1	Adams
	1	Seward
Eastern Phoebe *Sayornis phoebe*	1	Nuckolls
	1	Seward
Say's Phoebe *Sayornis saya*	1	Cuming
Horned Lark *Eremophila alpestris*	2	Cuming
Barn Swallow *Hirundo rustica*	9	Adams
	1	Thomas
Common Crow *Corvus brachyrhynchos*	1	Seward
House Wren *Troglodytes aedon*	5	Cuming
	1	Seward
Long-billed Marsh Wren *Telmatodytes palustris*	1	Garden
Catbird *Dumtella carolinensis*	1	Adams
Brown Thrasher *Toxostoma rufum*	4	Adams
	1	Cuming
	1	Seward
Robin *Turdus migratorius*	1	Adams
	5	Cuming
	1	Seward
Eastern Bluebird *Sialia sialis*	1	Nuckolls
	3	Stanton
	1	Thomas
Loggerhead Shrike *Lanius ludovicianus*	1	Douglas
	1	Saline
	1	Seward
	1	Thomas
Yellow Warbler *Dendroica petechia*	1	Douglas
	1	Lincoln
House Sparrow *Passer domesticus*	1	Seward

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Species	**Number of Nests**	**County**
Meadowlark *Sturnella sp.*	2	Adams
	1	Seward
	1	Thomas
Yellow-headed Blackbird *Xanthocephalus xanthocephalus*	1	Garden
Red-winged Blackbird *Agelaius phoeniceus*	1	Lincoln
	1	Seward
	6	Thomas
Orchard Oriole *Icterus spurius*	1	Adams
Baltimore Oriole *Icterus galbula*	1	Cuming
Common Grackle *Quiscalus quiscula*	1	Cuming
	1	Seward
Brown-headed Cowbird *Molothrus ater*		

Species parasitized:

Species	**No. Nests**	**No. Eggs**	**County**
Eastern Kingbird	1	1	Seward
Eastern Phoebe	1	1	Nuckolls
Red-winged Blackbird	1	2	Seward
Orchard Oriole	1	3	Adams
Blue Grosbeak	1	2	Cuming
Lark Bunting	1	1	Adams
	1	1	Adams
Grasshopper Sparrow	1	2	Adams
Lark Sparrow	1	2	Adams
	1	1	Adams

Species	**Number of Nests**	**County**
Cardinal *Richmondena cardinalis*	2	Adams
Blue Grosbeak *Guiraca caerulea*	2	Cuming
Dickcissel *Spiza americana*	2	Cuming
American Goldfinch *Spinus tristis*	1	Thomas
Rufous-sided Towhee *Pipilo erythrophthalmus*	1	Thomas
Lark Bunting *Calamospiza melaynocorys*	2	Adams
Grasshopper Sparrow *Ammodramus savannarum*	6	Adams
	3	Thomas
Lark Sparrow *Chondestes grammacus*	3	Adams
	3	Thomas
Chipping Sparrow *Spizella passerina*	1	Lancaster

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COMPARATIVE ARRIVAL DATES OF SELECTED MIGRATORY BIRDS IN SELECTED COUNTIES IN NEBRASKA

Doris Gates

For the past 49 years, Annual Cooperative and Spring Migration and Occurrence Reports have been published in the Nebraska Bird Review. It seems that these reports should reveal a number of interesting things if anyone wished to search for them. William F. Rapp, Jr., used them to compile the "Twenty-five Year Summary of Bird Migration in Nebraska" the last installment of which was published in the January 1956 Number. Unfortunately, this series was not completed, wrens being the last birds considered.

Other possible studies might include fluctuations of ranges of certain erratic species as Red Crossbills, Evening Grosbeaks, Redpolls, and others. The gradual extension of range of some species is another possibility—as the westward movements of Cardinals, Myrtle Warblers and Tufted Titmice have been of some interest in recent years because of their change of range.

In the present study, an effort was made to learn the relative arrival dates of birds in Douglas County (Omaha) and Scotts Bluff County (Scottsbluff). These represent eastern and western extremes at nearly the same latitude (41° 15" and 41° 75" respectively) in Nebraska. Douglas County has an altitude of 1,000 feet above sea level as opposed to 4,662 feet for Scotts Bluff County.

Other comparisons were made between Lincoln (North Platte and Hershey) and Logan (Stapleton) Counties which are very close together nearly in the center of the state. Altitude at North Platte is 2,826 feet.

Migrating birds were chosen that are quite conspicuous and which live close to buildings, usually, so as to get a more accurate first date.[1] This is not as easy as it might seem. Red-headed Woodpeckers (*Melanerpes erythrocephalus*) seem to qualify, but the fact is, this bird probably should be classed as a permanent resident in the southeast corner of the state since both adults and immatures can be seen throughout the winter in Nemaha and Douglas Counties. Often dates given for this species reflect winter birds rather than migratory ones. The same is true of Killdeers (*Charadrius vociferus*) and Common Grackles (*Quiscalus quisoula*). In the west, none of these may be seen in winter (with the possible exception of an occasional Killdeer). Brown Thrashers (*Toxostoma rufum*) and Eastern Phoebes (*Sayornis phoebe*) are possible candidates, but dates for them were so various that it seems likely that they were present earlier than they were actually reported in some years.

Among the birds which were chosen there were some winter dates, too, as the House Wren for Hastings on January 1. The observer is reliable, so apparently the bird was out of place for some reason, possibly injury. Studies like this emphasize the importance of making comments about the birds. For example, "A House Wren was observed on January 1, however, the migratory wrens did not arrive until . . . ." and a later date should be given.

The birds selected were: Common Nighthawk (*Chordeiles minor*), Eastern Kingbird (*Tyrannus tyrannus*), Barn Swallow (*Hirundo rustica*),

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[1] The use of "door-yard" species should eliminate much, if not all, of the effect of differences in frequency of observation trips - a difference which cannot be determined from the available data.

House Wren (*Troglodytes aedon*), Red-eyed Vireo (*Vireo olivaceus*), Yellow-breasted Chat (*Icteria virens*), Baltimore Oriole (*Icterus galbula*), and Chipping Sparrow (*Spizella passerina*). According to Sibley and Short (1964), Baltimore and Bullock's Orioles (*Icterus bullockii*) freely inter-breed in Nebraska and should be considered conspecific. Where these two orioles are listed separately in the reports, the earlier date was used.

TABLE 1

Comparisons Between Douglas and Scotts Bluff Counties

Species	Total Years	Years Earlier Doug.	Ave. Days	Years Later Doug.	Ave. Days	Same	Greatest Diff. Days	Shortest Diff. Days
Common Nighthawk	13	11	14.6	2	3.5	0	27	1
Eastern Kingbird	11	10	13.5	1	1.0	0	31	1
Barn Swallow	13	9	8.4	3	3.0	1	14	0
House Wren	13	13	16.6	0		0	30	9
Red-eyed Vireo	12	12	17.0	0		0	36	2
Yellow-breasted Chat	11	11	16.1	0		0	35	6
Baltimore Oriole	12	12	10.4	0		0	17	4
Chipping Sparrow	10	10	17.0	0		0	24	6
Average of average differences			14.2		2.5			

Results of the study appear in Tables 1 and 2. The eastern station was used as a base and the days above the base were considered as later days of arrival and recorded as plus. If an earlier date is given than the base, the days were recorded as minus. Averages were computed by dividing the total plus days by the number of years of plus dates. Likewise, the number of minus days were totaled and divided by the number of minus years.

Total number of years used in comparing Douglas and Scottsbluff Counties range from 10 to 13. The reason for the variation lies usually in the fact that the bird was not reported in some years. Some reporters fail to give a date because they feel they did not get the first date. In some cases the dates were too early or late to consider. Winter dates of Chipping Sparrows were thrown out as were June dates for Common Nighthawks.

As shown in Table 1, most arrival dates were earlier in Douglas County. There were two exceptions of the Common Nighthawk, one of the Eastern Kingbird, and three of the Barn Swallow. The greatest difference in eastern and western arrival was 36 days in the Red-eyed Vireo and the least time was zero in Barn Swallows meaning that they arrived on the same day in the two counties. Barn

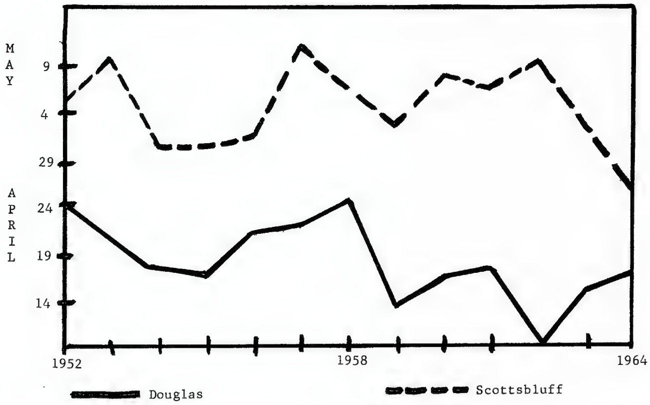
TABLE 2

Comparisons Between Lincoln and Logan Counties

Species	Total Years	Years Earlier Lincoln	Ave. Days	Years Later Lincoln	Ave. Days	Same	Greatest Diff. Days	Shortest Diff. Days
Eastern Kingbird	16	11	4.8	1	7.0	4	12	0
House Wren	17	8	6.3	8	7.0	1	22	0
Baltimore Oriole	17	4	3.6	10	5.1	3	11	0
Average of average differences			4.9		6.3			

Swallows had the narrowest lapse of time (average of 8.4 days) and the Red-eyed Vireos and Chipping Sparrows had the greatest lapse of time (average 17.0 days). By totaling the average days difference and dividing by the eight species studied, one learns that the average difference is 14.2 days, or spring seems to arrive about two weeks earlier in Omaha than in Scottsbluff.

If two relatively close reporting areas should be compared, would their data be the same? Results from



HOUSE WREN

The graph of the arrival dates of the House Wren seems rather representative of the findings of this study and is included for that reason. The solid line indicates Douglas County while the broken line indicates Scotts Bluff.

Lincoln and Logan Counties are shown in Table 2. Though Eastern Kingbirds usually appeared in Lincoln County earlier, Baltimore Orioles came to Logan County earlier and the House Wren came to each early the same number of years, eight years. The averages show that the birds arrived in Logan County a little earlier than in Lincoln County. With reliable reporters in both places, why the difference? It is probably not significant. If it is true that birds come back to the same areas, perhaps the Logan County ones are of an earlier arriving population. Another interesting feature may be noted here. Many people believe that birds return on the same date every year. This study shows that such is not the case.

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Chadron

SANDHILL CRANE CASUALTIES IN THE BLIZZARD OF MARCH 22, 1966

In mid-March, 1966, there were about 100,000 Sandhill Cranes scattered, in large flocks, from Lexington on to Grand Island in the Platte River valley. These, as is their custom, had paused in the northward spring migration in this area.

Through most of early March we enjoyed very mild weather; mostly clear with moderate winds, and temperatures in the mid 50's. On the morning of March 22 the skies were very cloudy and some rain mixed with sleet fell. This continued until about 3 PM, when the full fury of the storm hit the Elm Creek - Overton area. Northwesterly winds, gusting up to 70 mph, drove a fine powdery snow into a blinding milky haze which resembled dense fog. This reduced visibility to nearly zero.

The Cranes were feeding out in the harvested corn fields of the Platte River valley at this time. Shortly after the storm hit they tried to get back to the river, as is their habit for night roosting. This was extremely hazardous with the reduced visibility and strong winds, and numerous collisions with trees and power lines resulted.

I can attest to the extent of this reduced visibility, as I was driving through the storm at this time. I could not even see the fences and telephone poles along the roadside, and much of the time I could not even see the side of the road.

The next morning U. S. Game Agent Loren Bonde and Nebraska Conservation Officer Patrick traveled the Interstate highway, near Elm Creek and Odessa, and picked up 14 dead and 3 injured Cranes under the power lines near it. Nebraska Conservation Officer Salak reported 20 dead Cranes under a power line in one field near Grand Island. Subsequent conversations with area farmers revealed that there were numerous dead Cranes lying in many isolated fields.

It is hard to tell how many Cranes collided with the numerous trees in the river valley and lay concealed in the dense brush. I would hesitate to estimate the number of Cranes lost, but do believe that it would amount to several hundred.

Nebraska Waterfowl Biologist John Sweet reported several White-fronted Goose mortalities as a result of this storm, but the loss was very slight as compared to the Crane loss. This was probably due to the fact that most of the Geese were roosting on the large lagoons, south of the Platte River valley, at the time the storm hit. There they merely sat tight and rode the storm out.

—*Robert H. Wheeler, U. S. Game Management Agent, North Platte*

Before the above article had been received, but after the Annual Meeting, at which some participants commented that they understood there were severe losses in the storm, Mrs. M. F. Shickley, North Platte, wrote:

"I found no evidence of Cranes killed by the storm and the farmers I talked to had not found any, but that would be in a relatively small area and my investigation of the matter was somewhat casual. I looked for dead birds at the park," (in North Platte. Ed.) "too, under the trees where birds roost and any area where I thought they might show up. I didn't find any, and the park foreman told me his men hadn't reported any - if that means much. It doesn't seem logical that we didn't lose some birds in such a fierce storm, but I couldn't find any evidence of it."

The storm struck North Platte earlier - about noon - which might have made the visibility better. Ed.

ROSS' GEESE IN NEBRASKA[1]

John T. Sweet and Kenneth Robertson

Prior to 1963 there were no authenticated records on the Ross' Goose (*Chen rossii*) in Nebraska. This fact is substantiated by Mrs. John Leushen (Nebraska Bird Review 31:51). A mounted specimen of an immature Ross' Goose, previously uncatalogued, has recently been brought to light at the University of Nebraska State Museum (Tate, 1966). Very little is known about this specimen except that it is presumed to have been taken in the vicinity of Hooper, Nebraska along the Platte River during the fall of 1922. It has since been catalogued as UNSM ZM #11255.

A banding program was initiated in 1963 on a flock of Lesser Snow Geese (*Chen hyperborea*), which pass through the Nebraska Panhandle on their spring migration. On April 1, 1963, a total of 110 geese was trapped and banded from a flock estimated at 10,000 birds. The banded birds consisted of 102 Lesser Snow Geese, two Blue Geese (*Chen caerulescens*) and six Ross' Geese.

The six Ross' Geese were sexed and aged as one adult male, one immature female, and four immature males. In addition to the six unbanded birds, an immature female Ross' Goose, previously banded and wearing a lavender plastic necktie was captured. Banding records, maintained by the U.S. Fish and Wildlife Service, indicated that this bird had been banded the previous fall near Kindersley, Saskatchewan, Canada (Dzubin, 1965).

No trapping effort was made in the spring of 1964. An attempt was made in early April of 1965, but poor trapping conditions limited the catch to 44 Snow Geese.

From an estimated flock of 7,000 birds, a total of 225 geese were captured and banded on March 30-31, 1966. Of this total, there were 179 Snow Geese, one Blue Goose, and 45 Ross' Geese. Age and sex of the Ross' Geese were 17 adult males, 23 adult females, one immature male and four immature females.

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[1] This paper represents a contribution from Nebraska Pittman-Robertson Project W-15-R, "Surveys and management of Waterfowl." Nebraska Game, Forestation and Parks Commission.

Thirty-nine Ross' Geese were captured on March 30 on the first trapping attempt, and six birds were captured on the second day's effort. In addition to the birds banded, one immature female Ross' Goose which had previously been banded, was captured. Banding information for this bird has, as yet, not been received.

All of the birds captured were trapped on a sandhill lake approximately ten miles northeast of Alliance, Box Butte County, Nebraska, by Nebraska Game, Forestation and Parks Commission personnel. The birds were captured on loafing sites, with projected net traps.

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Game, Forestation and Parks Commission

MOURNING DOVE NESTING SUCCESS AND NEST SITE SELECTION IN A SANDHILL REGION OF NEBRASKA

Ronald D. Klataske

The Mourning Dove (*Zenaidura macroura*) is admired as a song bird and as a game bird throughout the United States. This dove is the most abundant American game bird (Haynes, 1961) and is the only one to nest in all 48 continental states (Edminster, 1954).

Since it is extensively hunted, complete knowledge of the Mourning Dove's nesting habits and needs is vital to the wise management of this species. However, little information has been published about Mourning Dove nesting or production in the Nebraska Sandhills.

This research was initiated to determine the nesting success and the nest site selection of the Mourning Dove at the Valentine National Wildlife Refuge in Cherry County, northwestern Nebraska, during the summer of 1965.

Acknowledgements are extended to Messrs. Jon M. Malcolm, Assistant Refuge Manager, and Nelius B. Nelson, Refuge Manager, for their willing assistance with this project.

STUDY AREA

The study was conducted along the northern shore of Hackberry Lake, near the headquarters of the Valentine National Wildlife Refuge. This area is within the Nebraska Sandhills—a region made up of grassy hills, meadows, marshes and lakes. Perennial grasses are the dominant vegetation, with trees and shrubs occurring around farmyards and in shelterbelts.

Because of the extensive sandy soils there is no cultivation on or near the refuge. Agricultural use of land in this region is limited to haying and grazing by cattle (Kobriger, 1965).

A total of thirteen species of trees occurred within the study area (Table 1), which was about 10 acres in size. Three residences, refuge headquarters and other buildings, roads, lawns and shrubs were also within the area.

METHODS

The study was conducted between June 10 and September 10, 1965—primarily on weekends and evenings, during the author's spare time while working as a wildlife biology aide at the Refuge.

The research unit was systematically searched for nests once each week, a task which required approximately 10 to 15 hours weekly. Doves have an incubation and brooding period of about 14 days each (Caldwell, 1964). Thus, a successful nest was active for about 28 days and had at least four chances of being discovered while in use.

Once a nest was discovered, it was periodically viewed from a distance to discover if it was still active. The young were banded when about 10 days old. The tree species in which a nest was located was recorded, and a numbered metal tag was placed at the base of the tree.

All trees in the study area with a diameter larger than three inches, three feet above the ground, were counted to measure the nesting habitat available and evaluate the nesting preferences of the Mourning Dove. No nesting was observed in trees with a diameter smaller than three inches.

RESULTS AND DISCUSSION

Nest Site Selection

The tree species which appeared to be most preferred by Mourning Doves for nesting sites included Chinese elm[1], ash, American elm and red cedar, respectively.

Although there were only 12 Chinese elm trees, they contained 7 nests, with an average of only 1.7 Chinese elm trees per nest. Likewise, 15 American elm trees contained 4 nests, with an average of 3.8 trees per nest. The two elm species combined made up 2 percent of the 1,404 trees available and contained 12 percent of the 93 nests. Most elm trees of both species were large and provided many potential nesting sites.

There were only 3 ash trees present, and one nest was found in these. Due to the small sample of ash trees, the nesting observed in these may not be representative.

Of the more abundant tree species in the study area, a noticeable preference for nesting sites in red cedar was observed. There were 6.9 red cedar trees for each nest in a red cedar tree. Although these trees comprised 15 percent of the trees available, they contained 32 percent of the nests. These evergreen trees were most important as nesting sites early in the season when deciduous trees lacked concealment.

Ponderosa pine, willow and cottonwood trees were also common and provided Dove nesting sites. Mourning Dove nesting in these trees was approximately in proportion to their relative abundance. Ponderosa pine comprised 10 percent of the trees, and they contained 11 percent of the nests; cottonwoods made up 4 percent of the trees and they contained 4 percent of the nests; willows comprised 19 percent of the trees and they contained 16 percent of the nests. There were 14.2 pine, 15.3 cottonwood and 17.5 willow trees for each dove nest in each species.

Black locust and mulberry trees appeared to be the least favored for nesting, of the common tree species present. Only 19 percent of the nests were in black locust, which made up 42 percent of the trees available, and 3 percent of the nests were in mulberry trees, which made up 7 percent of the trees. There were 32.6 black locust and 32.3 mulberry trees for each dove nest in each species.

Although Doves appeared to prefer certain tree species for nesting, the growth form of a tree and the surrounding habitat is important in determining its suitability for dove nesting. Trees with few branches, such as those growing in dense stands, had less nesting activity than trees with many branches and more individual concealment.

All except two nests were constructed by the Doves themselves. One nesting attempt was in a Robin (*Turdus migratorius*) nest, and an-

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[1] Scientific names of trees are given in Table 1.

Table 1. **Relationship between the number of trees and the number used for nesting by doves**

	No. of trees	Percent of total trees	No. of nests	Percent of total nests	nest/tree
Black locust (*Robinia pseudoacacia*)	578	41.8	18	19.4	1/32.6
Willow (*Salix* spp.)	263	18.7	15	16.1	1/17.5
Red Cedar (*Juniperus virginiana*)	207	14.7	30	32.2	1/6.9
Ponderosa pine (*Pinus ponderosa*)	142	10.1	10	10.8	1/14.2
Mulberry (*Morus* sp.)	97	6.9	3	3.2	1/32.3
Cottonwood (*Populus deltoides*)	61	4.3	4	4.3	1/15.3
American elm (*Ulmus americana*)	15	1.1	4	4.3	1/3.8
Chinese elm (*Ulmus pumila*)	12	0.9	7	7.5	1/1.7
Honey locust (*Gleditsia triacanthos*)	8	0.6	0	0.0	
Boxelder (*Acer negundo*)	8	0.6	1	1.1	1/8
Ash (*Fraxinus* sp.)	3	0.2	1	1.1	1/3
Russian olive (*Elaeagnus angustifelia*)	1	0.1	0	0.0	
	1,404	100.0	93	100.0	

other in an Eastern Kingbird (*Tyrannus tyrannus*) nest. Doves nesting in other bird's nests is common (Hanson and Kossack, 1963) and has been observed by many researchers.

No ground nesting was observed in the area. However, it is common in Oklahoma (Downing, 1959). Ground nesting in the study unit may have been limited by predators, such as snakes. The stomach contents of three bullsnakes (*Pituophis* sp.) were examined. One contained two young doves, and another contained a dove egg.

Nesting Success and Production

Information on nesting success is based on 93 nesting attempts, in 82 different nests (11 renested in the same nest), which were known to contain eggs or young Doves during the study.

Fifty-seven (61.3 percent) of the 93 nesting attempts produced young to fledging—a total of 107, with an average of 1.15 per nesting attempt. Forty-eight (84.2 percent) of the 57 successful nesting attempts which produced fledgings, produced two each, while eight (14 percent) produced one each, and one (1.8 percent) produced three.

The 61.3 percent success recorded here is higher than that recorded in two previous Nebraska studies. LaPointe (1958) found that only 26 percent of the 98 nesting attempts he studied in a shelterbelt near Grand Island, in central Nebraska, were successful; while McClure (1946) reported a success of 47.9 percent of the 385 nestings he observed near Ord, in central Nebraska. However, the success observed at the Valentine National Wildlife Refuge is similar to that recorded in Iowa. Carter (1957) stated that 60.3 percent of 327 nestings in Lewis, Iowa, were successful; and Jumper, *et al.* (1956) reported a success of 61 percent of 203 nestings observed in the same town.

Thirty-six (38.7 percent) of the 93 nesting attempts were unsuccessful, because of desertion, predation, weather and unknown factors. Eight nests containing eggs were deserted, eggs in seven nests were destroyed by birds of unknown species, and the eggs were blown by the wind from two nests.

Four young Doves were found dead in four separate nests, but the cause of death was not determined. The remaining unsuccessful nesting attempts were due to unknown causes.

Usually only two Mourning Dove eggs were found in a nest, however, five of 101 nests observed (including eight outside the study area) contained three eggs each. Of these, all three young hatched in only two nests, and were successfully reared in only one.

SUMMARY

Fifty-seven (61.3 percent) of 93 Mourning Dove nesting attempts observed in northwestern Nebraska were successful. The causes of unsuccessful nesting included desertion, predation and weather.

Mourning Doves appeared to prefer Chinese elm, American elm and red cedar for nest sites. Ponderosa pine, cottonwood and willow trees were used in approximate proportion to their relative abundance. Black locust and mulberry trees appeared to be the least favored for nesting, of the more abundant tree species present. However, the growth form of a particular tree may be as important as its species in determining its value as nesting habitat. No ground nesting was observed.

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POSSIBLE NESTING McCOWN'S AND CHESTNUT-COLLARED LONGSPURS IN NORTHWEST NEBRASKA

While on a vacation trip of touring and birdwatching through northwestern Nebraska, I located, on June 2, 1966, several colonies of McCown's and Chestnut-collared Longspurs in a partially-grazed short-grass prairie habitat about 33 miles north of Scottsbluff, Nebraska. Males of both species were in full breeding plumage and were in active courtship, i.e., singing, feather fluffing, defense of their chosen mate. Both sexes performed the aerial flight-song courtship displays, though more often and more spectacularly performed by the males. There were at least 70 McCown's and at least 16 Chestnut-collared present.

The bulk of the Longspurs were in a field on the south side of State Road 87 about 33 miles north of Scottsbluff. The remainder were on the south side of a dirt connecting road between State Roads 87 and 29. The main colony was found 5 to 6 miles beyond (as one drives north on 87) the cut-off onto the connecting dirt road. A waterpump with a windmill (about 175 yards from the road) seemed to be their focal point. The lesser colony was found one to two miles west along the dirt road.

No positive nesting activities were seen; however, several McCown's were noted carrying debris in their bills during their aerial flights. Conceivably, that might have been part of the courting ritual. Nevertheless, June is exceptionally late to find Longspurs in Nebraska unless they were nesting. Repeated stalking (for telephotoing purposes) and walking through the prairie did not chase them away. Individual pairs seemed to return to specific ground and "air" sites as soon as I had cleared their territory. I obtained reasonable 550 mm tele-photo shots (35 mm, color) of the McCown's.

—*Paul G. DuMont, Washington, D.C.*

BOOK REVIEWS

BIRDS OF COLORADO, Alfred M. Bailey and Robert J. Niedrach, Denver Museum of Natural History, Denver, Colorado, 1965; 895 pp., Vol. I and II. $35.00

"Encyclopedic" is the word for the two volumes of BIRDS OF COLORADO by Bailey and Niedrach. The central states have long needed a definitive work—if any such study can indeed be definitive. The authors have many years of experience not only in Colorado but in other states and other parts of the world. They are students in the true sense of the word. They have gathered information from many publications, and have put together outstanding photographs as well as colored plates of most of the birds discussed. There are 124 colored plates of 420 species representing the work of 23 artists, and over 400 photographs.

Although the body of information in from Colorado, notes are made for birds of Nebraska, Kansas, New Mexico, Utah, and Wyoming. Aside from detailed descriptions of birds and their nesting habits, experiences of the authors and other qualified persons are given in very readable non-technical form. The first 70 pages include such topics as general information about birds (migration, classification of birds in outline form, etc.), history of ornithology in Colorado, and a brief introduction to the ecology of the mountains showing life zones and the major plants and birds that might occur there. Genera of plants are outlined in their families and even some of the species are given as well as common names.

Any serious bird student, particularly of the states covered by the book, would not be without these two volumes and any eager newcomers to the study of ornithology would do well to buy the BIRDS OF COLORADO before investing in other books for their libraries.

—Doris Gates

HANDBOOK OF WATERFOWL BEHAVIOR. —by Paul A. Johnsgard. Cornell University Press, Ithaca, New York. 1965: 378 pp. $10.00.

Paul Johnsgard is undoubtedly the best informed individual on the behavior of ducks and their relatives. He has gained his information in years of study of the birds at first hand in the field and in gardens where the birds were at least semi-free. No other person has witnessed some of the displays that Dr. Johnsgard describes.

Behavior patterns may be used as a means of classification and in fact in this book some changes of classification are suggested. In an appendix members of the family Anatidae are arranged in their probable natural relationship. The book is well illustrated with sketches and photographs.

One of the most valuable contributions of the book, aside from Anatidae classifications, is the presentation of a method of study which could be applied to other groups of birds.

Any serious bird student should consider the HANDBOOK OF WATERFOWL BEHAVIOR a requirement for his library.

—Doris Gates

NOTES

Cattle Egret. On September 11, 1965, Mr. and Mrs. Elden Lewis, farmers near Holstein, observed a strange white bird in the pasture with a herd of cattle. After careful study of size and markings they identified the bird as a Cattle Egret.

—Bernice Welch, Hastings

Golden-crowned Sparrow. My husband, his granddaughter Cynde, age 11, Edith Meyer, and I were taking the spring count May 14, 1966. We saw some birds we couldn't identify along a freshwater ditch and among the bushes on the edge of it. Then another flew in with the yellow on the crown of its head. It stayed long enough for all of us to get a good look at a short distance. Cynde was the one who found the picture in Peterson's Western Guide and there was no doubt in any of our minds but what it was a Golden-crowned Sparrow.

—Mary Ann Banghart, Scottsbluff

Summer Ring-necked Duck. I saw a Ring-necked Duck on Lake Manawa (Iowa) on June 19, 1966. I had not seen one since April 1 (at the same place), nor have I seen one since then through August. When I first saw it it was in a sleeping position on the water, with the shoulder mark visible. I got close enough to see the ring on the bill without glasses. It made no movements except to raise its head from time to time, although I was walking along a bare shore.

—*R. G. Cortelyou, Omaha*

Distressed Coot. On June 6, 1966, I saw an adult American Coot on Lake Manawa (Iowa) in water shallow enough to have emergent vegetation nearby. Most of the time just the head and neck of the bird were showing, although at times it was completely under water and at other times it made slow flying motions with its wings which would bring more of the bird to the surface (but still much lower in the water than is normal). When I first saw it a Pied-billed Grebe was close by, and other Coots a little farther off. None of these birds showed alarm, although the Grebe did drift off. The Coot made no sound that I was aware of. At times the bird was facing east, and at times west. The road by which I left the area went along the side of the bay in which I had seen the bird, but I saw no signs of the Coot when I left, so I gave up the idea of finding a boat and checking further. I suspect a turtle had caught it.

—*R. G. Cortelyou, Omaha*

Gray (or Hungarian) Partridge. Near a lagoon north of Edgar on June 25, 1966, a group of members of the Brooking Bird Club flushed a Gray or Hungarian Partridge. We thought it might have a nest in the area, but careful search failed to reveal one. The bird was somewhat larger than a quail and showed the short rufous tail very clearly when it flew, so we felt it could be nothing else. The local conservation officer, Bruce Wiebe, said that Gray Partridges had been introduced in that area several years ago and that they were sighted occasionally. Other members of the party were Mrs. Elden Percival, Mrs. A. M. Jones, Mrs. R. R. Damerell, and Miss Vera Maunder.

—*Mrs. O. W. Ritchey, Hastings*

Roseate Spoonbill. On August 20, 1966, Mr. and Mrs. Paul Hohnstein, Hastings, Route 2, were startled to see a pair of tall pinkish wading birds with bright reddish feathers on their shoulders. They were in a roadside ditch just west of the Greenwood cemetery. Mrs. Hohnstein thought they were immatures for they seemed to have no feathers on their heads, which were peculiar in shape, with spoon-shaped bills. She reported the observation to Burton Nelson of the Hastings Museum, who went out at once but failed to find the birds. From the tracks that he saw and the details of the description given by the Hohnsteins Nelson was convinced that the birds were Roseate Spoonbills.

—*Vera Maunder, Hastings*

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